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For over 10 years, we have been assisting clients in gaining strategic insights and achieving growth through optimized data. We collaborate closely with our clients, offering valuable information that supports corporate goals, facilitates critical revenue decisions, and addresses business challenges. Our research studies empower clients to make superior, data-driven decisions, comprehend market forecasts, identify future opportunities, and enhance efficiency.

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# Plant Identification Apps Market

## GLOBAL MARKET SIZE, STATUS AND FORECAST TO 2032

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By Type: Freemium Apps, Free Apps, Paid Apps

By Platform: iOS, Android, Web-Based

By Functionality: Image Recognition, Text-Based Identification, Voice Recognition, Augmented Reality (AR)

Market Value (USD Million)

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# 1 INTRODUCTION

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## 1.1 MARKET DEFINITION

Plant identification apps are AI-powered digital tools that enable users to recognize plant species through image recognition, text-based searches, or augmented reality. These apps leverage extensive botanical databases and machine learning algorithms to analyze plant characteristics such as leaf shape, color, texture, and vein patterns, offering accurate identification results within seconds. With advancements in artificial intelligence, these apps have evolved from basic recognition tools to comprehensive plant care solutions, integrating features such as disease diagnosis, growth tracking, and environmental adaptation insights. The growing global interest in plant conservation, sustainable agriculture, and home gardening has fueled the widespread adoption of these applications, making them an essential tool for professionals and enthusiasts alike.

The global plant identification apps market is experiencing significant growth, driven by the increasing penetration of smartphones, advancements in AI and image recognition technology, and the rising awareness of biodiversity conservation. The demand for such apps has surged across various end-user segments, including botanical research institutions, environmental organizations, agricultural enterprises, and hobbyist gardeners. Additionally, the integration of these applications with IoT-based smart gardening solutions has expanded their use beyond simple identification, offering real-time plant health monitoring and personalized care recommendations. The freemium business model dominates the market, with apps providing basic identification features for free while charging for advanced functionalities such as plant disease detection, detailed species information, and cloud storage for user-generated data.

The market is further influenced by regional trends, with North America and Europe leading in adoption due to high consumer spending on digital tools and strong institutional backing for biodiversity research. Asia-Pacific is witnessing the fastest growth, driven by increasing smartphone penetration, rising urban gardening trends, and government initiatives promoting sustainable agriculture. Emerging markets in Latin America and Africa also present significant opportunities, particularly in forestry management, agribusiness, and ecological conservation. The rise of citizen science initiatives, where users contribute plant data to global biodiversity projects, has further enhanced the accuracy and scope of plant identification applications.

Technological advancements in deep learning and augmented reality are shaping the competitive landscape, with developers continuously improving identification accuracy and expanding plant databases. The incorporation of voice recognition and AI chatbots for instant plant-related queries is also gaining traction. However, challenges such as inconsistent accuracy in rare species identification, data privacy concerns, and the reliance on internet connectivity in remote areas pose hurdles to market expansion. Additionally, competition from traditional botanical field guides and professional plant taxonomists remains a consideration, though digital solutions are rapidly bridging the gap with improved accuracy and accessibility.

## 1.2 MARKET SEGMENTATION

**FIGURE 1** GLOBAL PLANT IDENTIFICATION APPS MARKET SEGMENTATION



Source: Verified Market Research

The “Global Plant Identification Apps Market” is mainly split into three segments, i.e., Type, Platform, Functionality. On the basis of Geography, the market has been segmented into North America, Europe, Asia Pacific, Latin America and Middle East & Africa. North America is bifurcated into United States, Canada and Mexico. Europe is primarily divided into Germany, U.K., France, Spain, Italy, and Rest of Europe. Asia Pacific comprises of China, Japan, India, and Rest of Asia Pacific. Latin America is segmented as Brazil, Argentina, and Rest of Latin America. Also, Middle East and Africa comprises of UAE, Saudi Arabia, South Africa, and Rest of Middle East and Africa.

### 1.3 RESEARCH TIMELINES

FIGURE 2 RESEARCH TIMELINES



### 1.4 ASSUMPTIONS

PARAMETERS	ASSUMPTIONS
ECONOMIC STABILITY	<p>It is anticipated that a favorable economic environment will persist until 2032.</p> <p>The projected expansion of the economy is expected to draw in major companies to the market, leading to an uptick in expenditure.</p>
EXCHANGE RATE	<p>The average USD exchange rates for all foreign currencies have been taken into account as of 2024.</p> <p>Verified Market Research assumes that the fluctuations in the value of the USD are not expected to have a significant impact on the projections.</p>

## 1.5 LIMITATIONS

PARAMETERS	LIMITATIONS
PRIMARIES BY KEY PLAYER	Quantitative information for certain market segments is treated as confidential by industry players. Therefore, for these sub-segments, the market size has been determined using qualitative insights obtained during the study.
PRIMARIES BY REGION	In instances where there is a limited number of industry experts available, the regional market size is calculated based on weightages assigned to these markets, considering qualitative insights from industry experts and prevailing market trends.
COMPANY REVENUE	Some companies within the market are privately owned, and their revenue information is not publicly available. Consequently, the revenues of these companies are not incorporated. However, in such cases, paid platforms like D7B Hoovers, Factiva, etc., were consulted.
COMPANY DEVELOPMENTS	Developments of companies that are not disclosed in the public domain are excluded from the report.



## 2 RESEARCH METHODOLOGY

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### 2.1 DATA MINING

Research study on the Global Plant Identification Apps Market was performed in five phases which include Secondary research, primary research, subject matter expert advice, quality check, and final review. The process opted for conducting thorough research to make authentic and dynamic research reports is as follows:

### 2.2 SECONDARY RESEARCH

Based on the understanding of requirements, we conducted extensive secondary research to identify industry specifications, production processes, technological advancements, qualitative and quantitative data, along with factors influencing the growth of the Global Plant Identification Apps Market.

The secondary sources referred for the study include company websites, press releases, annual reports, scientific publications, patent databases, and research papers focused on Plant Identification Apps production, Platforms, and regulatory trends.

In addition, industry magazines, trade journals, association reports (such as publications from the International Nanocellulose Community), and government publications were reviewed to gather precise data on business opportunities and competitive developments in the Global Plant Identification Apps Market.

Quantitative and qualitative data was also extracted from reliable paid databases, including Reuters, Factiva, Bloomberg, One Source, and Hoovers, which contributed to an in-depth technical and commercial analysis of the market.

### 2.3 PRIMARY RESEARCH

The secondary research carried out at the primary level was then verified by primary research. Primary research was undertaken with various industry experts on acceptance of appointments for conducting telephonic interviews, sending questionnaires through emails, and in some cases face-to-face interactions. The secondary data collected was then verified by various industry participants which included Platform managers, marketing managers, VPs, CEOs, purchasing managers, and subject matter experts.

An interview with the mentioned participant's aids in the validation of our research findings regarding the industry. It helps in the provision of first-hand data on factors such as market size, growth, regional trends, market trends, and competition in the industry. This makes

our research findings authentic and precise which helps the clients in the decision-making process.

## 2.4 SUBJECT MATTER EXPERT ADVICE

The findings derived from secondary and primary research were further validated by in-house subject matter experts (SMEs) with extensive experience in biopolymers, nanocellulose, and sustainable materials markets.

The experts ensured that the research methodology, data points, and market assumptions were in line with global industry trends and that the report structure was tailored to meet specific client requirements. They also contributed to enhancing the overall presentation, clarity, and usability of the data for end clients.

## 2.5 QUALITY CHECK

The research team's analysis and findings were subjected to a multi-level quality check to ensure that all data points, forecasts, and market segmentations were accurate and aligned with client expectations. This process included two phases:

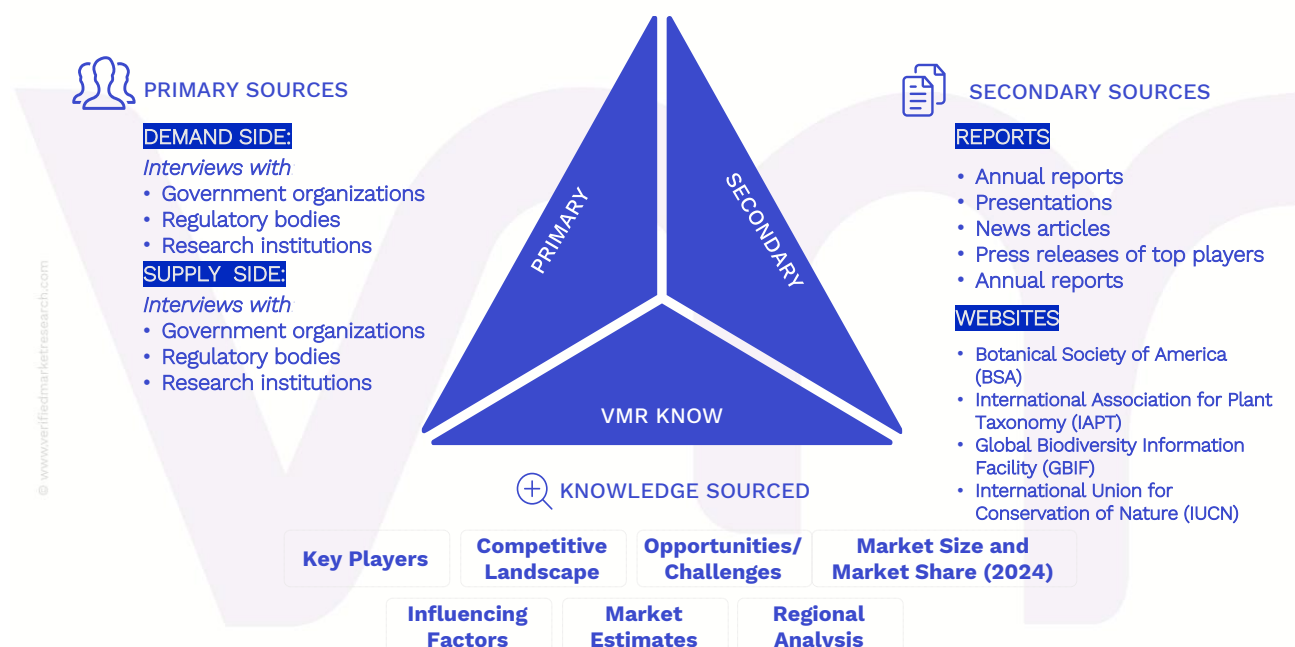
- Internal review by senior analysts, and
- Final review by subject matter experts, ensuring that the final document contained negligible errors and maintained the highest level of data accuracy and credibility.

## 2.6 FINAL REVIEW

Following the quality check, a final review was conducted to ensure the report structure, formatting, segmentation presentation, and narrative flow met the highest standards of delivery. The final review ensured that all client-specific requirements were fully addressed before report dispatch.

## 2.7 DATA TRIANGULATION

**FIGURE 3 DATA TRIANGULATION**



To calculate the market size, the report has considered the revenues generated from the sales of Plant Identification Apps. The revenue generated from the sales of these products are calculated through primary and secondary research. The report presenting the key players operating in the market are identified through secondary research and a corresponding detailed analysis of the top vendors in the market. The market size calculation includes product segmentation determined using secondary sources and verified through primary sources.

Market Share Analysis: The final market share of top 10 players in the region as well as at country level was chalked out by the process of data triangulation which would include secondary research done by VMR's research team through various sources such as

- Company websites, annual reports, financial reports, broker reports, investor presentations and SEC filings
- Internal and external proprietary databases, relevant patent and regulatory databases
- National government documents, statistical databases and market reports
- News articles, press releases and web-casts specific to the companies operating in the market

- Paid database

VMR contacted various key opinion leaders from the same industry, who are top and mid-level executives from top companies as well as executives (marketing heads, regional heads) from End-users (Botanical Gardens & Arboretums, Agriculture & Horticulture Industries, Forestry & Environmental Conservation Organizations, and Others) to collect information/data such as dominance of particular brand in each country as well as overall region, pricing of each brand and product.

The data for total number of product sales was determined through the primary research in each of the countries by interviewing key opinion leaders which included insights from

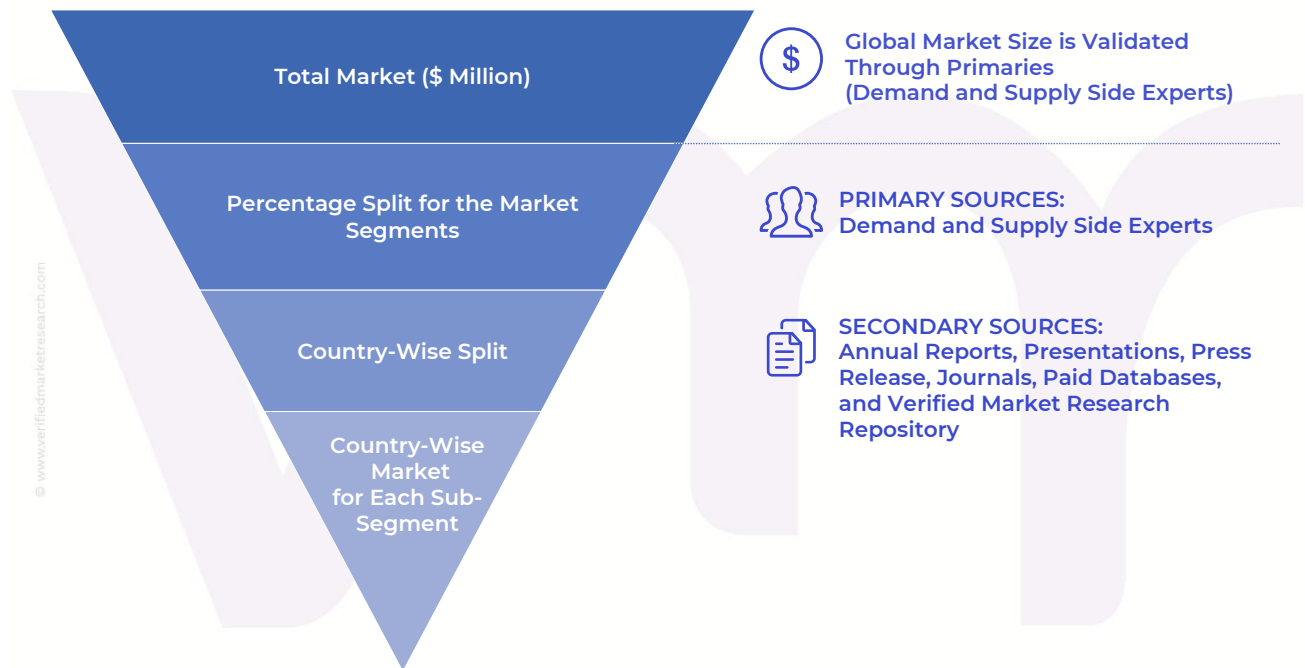
- C-Level Executives
- Marketing Manager, Brand Manager, Product Manager
- Sales Manager, Sales Officer, Regional Sales Manager, Country Manager
- Procurement Manager
- Production Manager
- Supply Chain Manager
- Technical Personnel
- Distributors

The average cost of the Plant Identification Apps with respect to its offering and services was gauged using public domain data & primary research.

## 2.8 BOTTOM-UP APPROACH



## 2.9 TOP-DOWN APPROACH

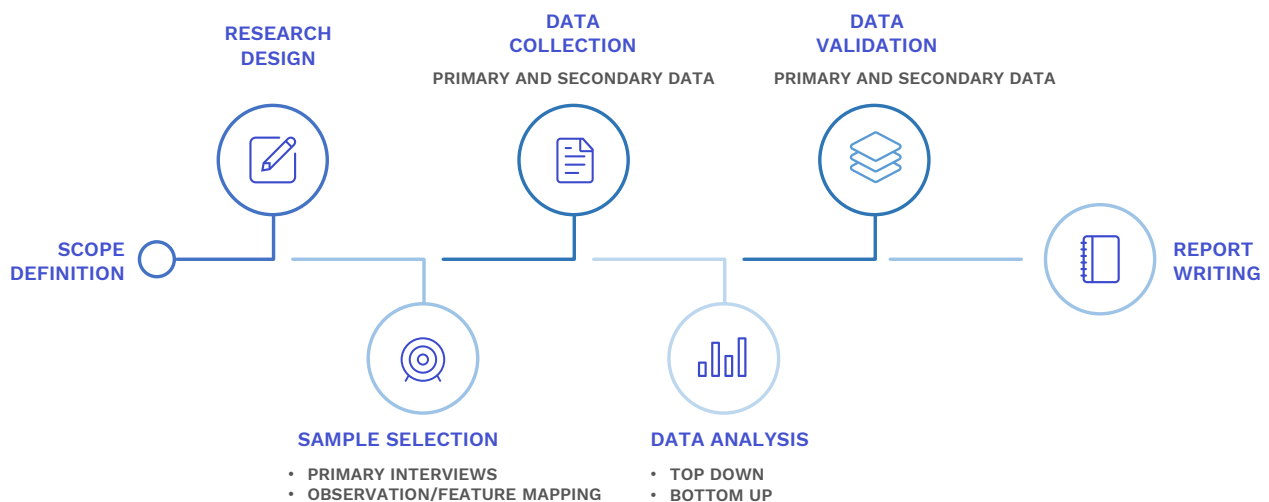


The Plant Identification Apps market estimations have been derived by analyzing parent market i.e., “AgriTech market” as well as understanding the product penetration, country and regional demand of Plant Identification Apps, top players regionally and country wise. The Plant Identification Apps are a child market of overall AgriTech market which was verified through several trade associations publications, government organizations’ data and trade data. Also, primary research was conducted with the market experts for each region as well as we have repository of panel of experts which is created over the years for each sector, who help us understand the dynamics of market on regular basis whenever we conduct primary interview with them.

The market for each Type, End-use Industry, Technology, Application, Distribution Channel, has been provided on a regional basis for the mentioned forecast period (2024-2032). We have used the bottom-up approach for market sizing, analyzing key regional markets, dynamics, and trends for various products, services, and end-uses. The global market has been estimated by integrating the regional markets.

## 2.10 RESEARCH FLOW

FIGURE 4 MARKET RESEARCH FLOW



## 2.11 DATA SOURCES

*FIGURE 5 DATA SOURCES*

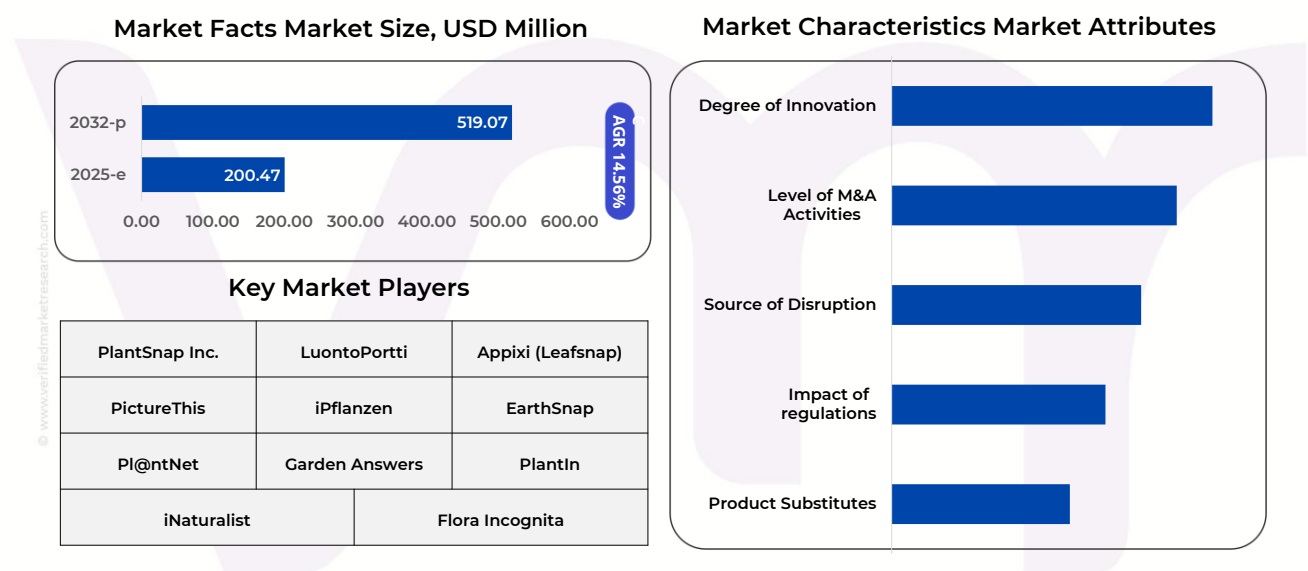
PARAMETERS	SOURCE
PRIMARIES BY KEY PLAYER	Quantitative data for certain market segments is classified as confidential by industry stakeholders. Consequently, the market size for these sub-segments has been determined using qualitative insights acquired during the study.
PRIMARIES BY REGION	In instances where there is a limited number of available industry experts, the regional market size is calculated by assigning weightages to these markets based on qualitative insights from industry experts and prevailing market trends.
COMPANY REVENUE	Some market entities are privately owned, and as a result, their revenue information is not publicly disclosed. Consequently, the revenues for these companies are not incorporated into the analysis.
COMPANY DEVELOPMENTS	Developments of companies that are not reported in the public domain are also excluded from the report.



# 3 EXECUTIVE SUMMARY

## 3.1 GLOBAL PLANT IDENTIFICATION APPS MARKET OVERVIEW

FIGURE 6 SUMMARY

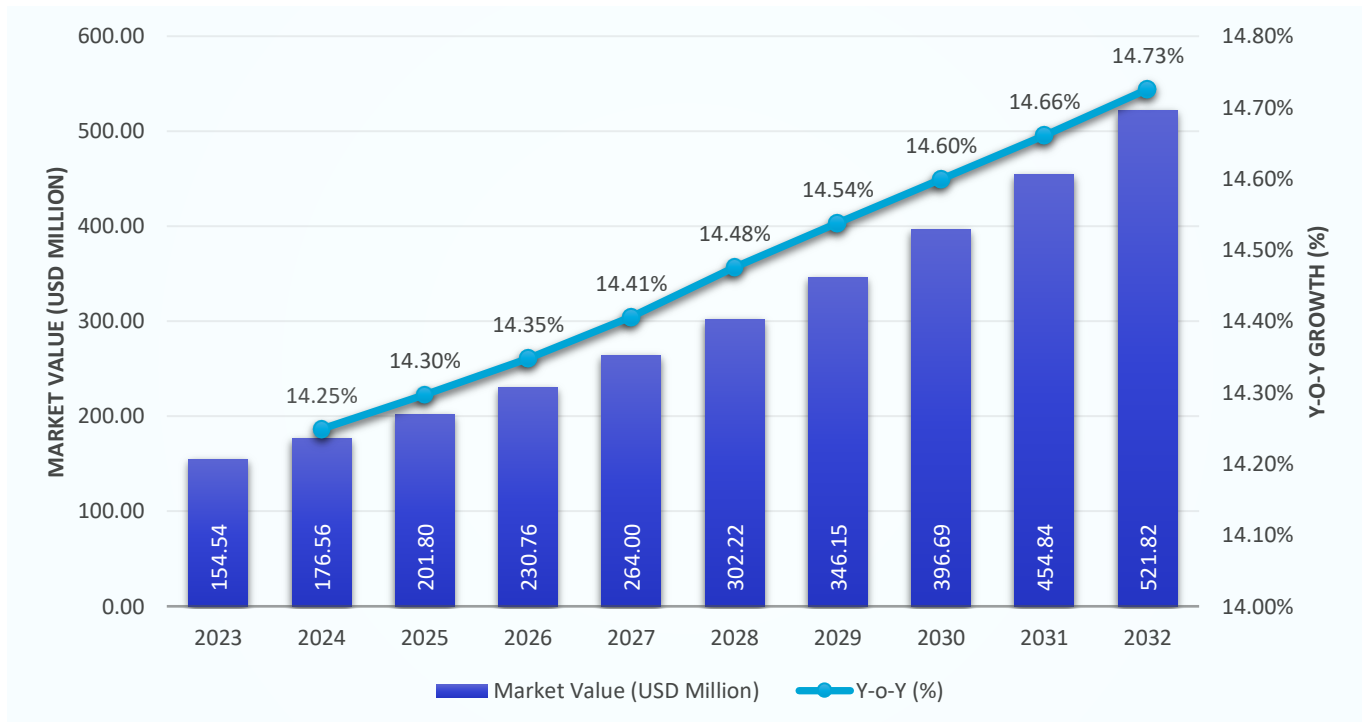


Source: Verified Market Research Analysis

The global plant identification apps market is driven by advancements in artificial intelligence, increasing smartphone penetration, and the rising global interest in plant conservation, gardening, and sustainable agriculture. These apps, powered by deep learning and extensive botanical databases, have revolutionized the way users identify and interact with plant species, offering instant recognition through image analysis, text-based searches, and augmented reality. The market is witnessing strong adoption across various sectors, including botanical research, agriculture, environmental conservation, and home gardening, as consumers and professionals seek efficient and accurate plant identification solutions. The shift towards digitalization in the agricultural and horticultural industries has further fueled demand, with plant identification applications integrating predictive analytics and plant health monitoring features to support decision-making in crop management and biodiversity conservation. Regionally, North America and Europe dominate the market due to high consumer spending on digital tools and strong institutional support for biodiversity research, while Asia-Pacific emerges as the fastest-growing region, driven by urbanization, increasing environmental awareness, and government initiatives promoting sustainable land use.

## 3.2 GLOBAL PLANT IDENTIFICATION APPS MARKET ESTIMATES AND FORECAST (USD MILLION), 2024-2032

**FIGURE 7** GLOBAL PLANT IDENTIFICATION APPS MARKET ESTIMATES AND FORECAST (USD MILLION), 2024-2032



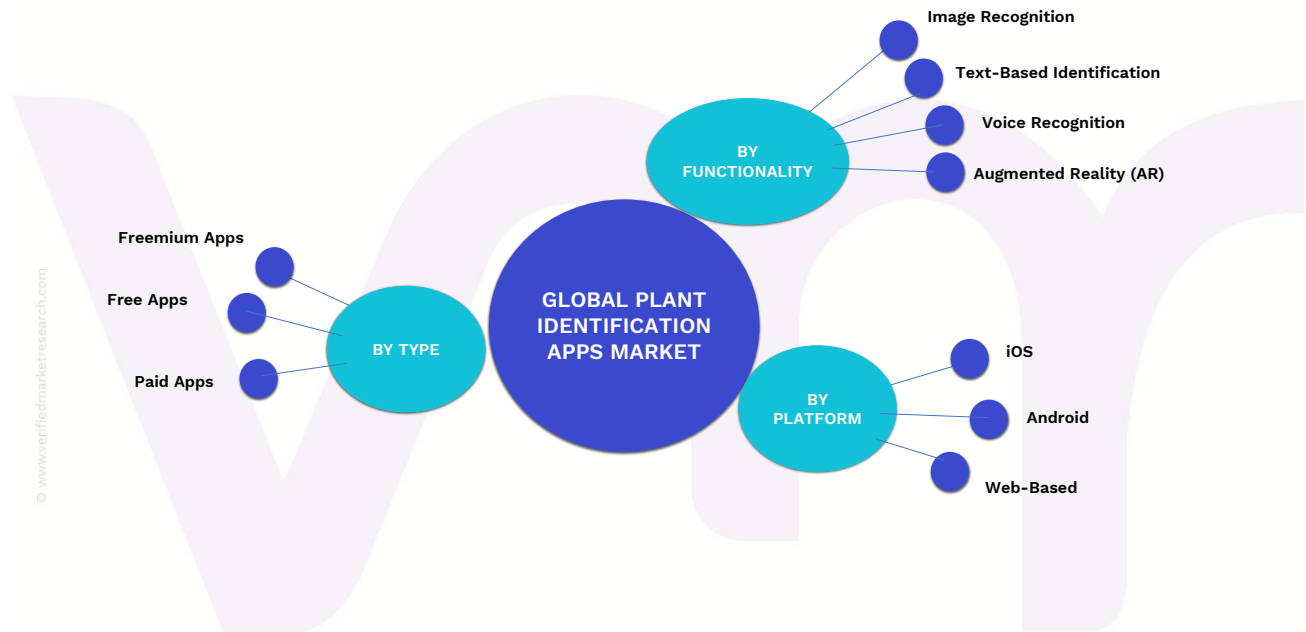
Source: Verified Market Research

Global Plant Identification Apps Market size was valued at USD 176.56 Million in 2024 and is projected to reach USD 521.82 Million by 2032, growing at a CAGR of 14.54% from 2025 to 2032.

The global plant identification apps market is projected to witness robust growth from 2023 to 2032, driven by several key factors, including advancements in artificial intelligence, increasing smartphone penetration, and growing awareness of biodiversity conservation. The rising adoption of AI-powered image recognition technology has significantly improved the accuracy and efficiency of plant identification, making these applications more reliable for a diverse user base, including researchers, agricultural professionals, and hobbyist gardeners. The surge in urban gardening and home-based horticulture, particularly in developed markets, is further propelling demand as consumers seek digital tools for plant care and disease diagnosis. Additionally, the expansion of citizen science initiatives and open-access biodiversity databases has enhanced the credibility and functionality of these applications, attracting partnerships with environmental

organizations and research institutions. The increasing focus on sustainable agriculture and smart farming solutions is also contributing to market growth, with plant identification apps integrating with IoT devices to monitor soil conditions, plant health, and climate impact. The Asia-Pacific region, driven by rising environmental consciousness and government-led afforestation programs, is expected to experience the highest growth rate. However, challenges such as data privacy concerns, inconsistent identification accuracy, and regulatory barriers in biodiversity-rich regions may impact market expansion.

### 3.3 GLOBAL PLANT IDENTIFICATION APPS ECOLOGY MAPPING

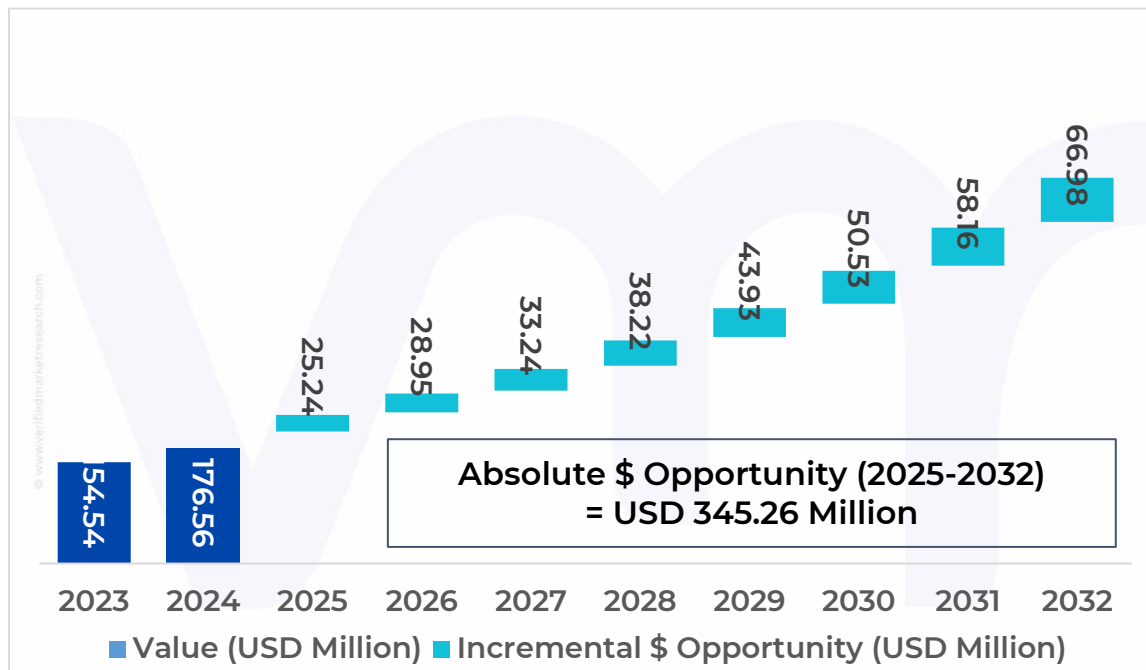


Source: Verified Market Research

The Global Plant Identification Apps Market is segmented based on Type, Platform, Functionality, and Region. Based on Type, the market is segmented into Freemium Apps, Free Apps, Paid Apps. Based on Platform, the market is segmented into iOS, Android, Web-Based. Based on Functionality, the market is segmented into Image Recognition, Text-Based Identification, Voice Recognition, Augmented Reality (AR). Based on Geography, the market has been segmented into North America, Europe, Asia Pacific, Latin America, the Middle East, and Africa.

### 3.4 GLOBAL PLANT IDENTIFICATION APPS MARKET ABSOLUTE MARKET OPPORTUNITY

**FIGURE 8** GLOBAL PLANT IDENTIFICATION APPS MARKET ABSOLUTE MARKET OPPORTUNITY



Source: Verified Market Research

Note: **Absolute \$ Opportunity** indicates the market's potential from 2025 to 2032, calculated by summing the incremental growth across all years highlighted in orange. In contrast, **Incremental \$ Opportunity** signifies the revenue growth in a particular year compared to the preceding one.

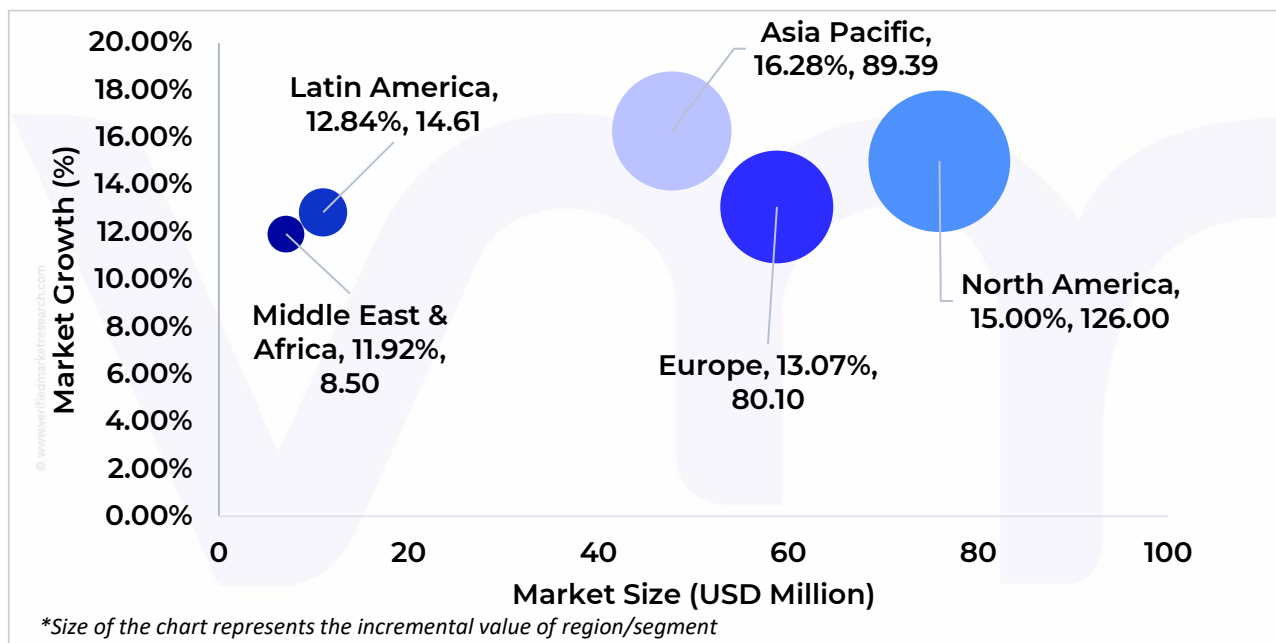
The above diagram represents the absolute market opportunity for the Global Plant Identification Apps Market. The Plant Identification Apps is estimated to gain USD 28.95 Million in 2026 over 2025 value and the market is projected to gain a total of USD 345.26 Million between 2025 and 2032.

The absolute market opportunity in the global plant identification apps market is expanding rapidly, fueled by technological advancements, increasing consumer engagement with plant care, and the integration of AI-driven solutions in agriculture and environmental conservation. With the growing penetration of smartphones and the widespread adoption of digital tools in biodiversity research, these applications have transformed from niche solutions into essential platforms for professionals and casual users alike. The rising trend of urban gardening, coupled with government initiatives promoting afforestation and conservation, has created substantial growth avenues for

plant identification technology. Additionally, the commercialization of these apps through freemium models and premium subscription offerings has opened up significant revenue streams, particularly in markets with high digital literacy and disposable income. The convergence of plant identification apps with emerging technologies such as IoT, augmented reality, and machine learning presents further monetization opportunities, particularly in precision agriculture and environmental monitoring. As regulatory frameworks evolve to accommodate digital biodiversity tracking, app developers and ecosystem stakeholders are expected to capitalize on expanding datasets to enhance identification accuracy and predictive capabilities.

### 3.5 GLOBAL PLANT IDENTIFICATION APPS MARKET ATTRACTIVENESS ANALYSIS, BY REGION

**FIGURE 9 GLOBAL PLANT IDENTIFICATION APPS MARKET ATTRACTIVENESS ANALYSIS, BY REGION**

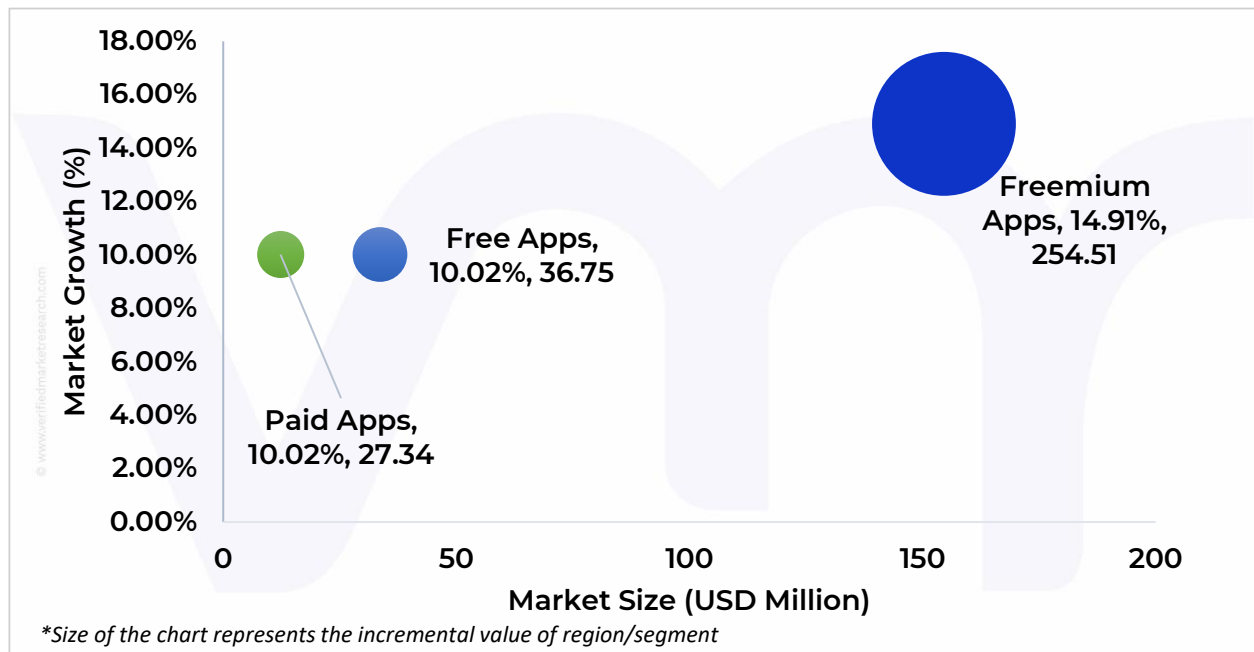


Source: Verified Market Research

North America remains the most lucrative region in the global plant identification apps market, driven by high consumer adoption, strong technological infrastructure, and significant investment in digital agriculture and biodiversity research. The presence of key market players, coupled with increasing demand from gardening enthusiasts, environmental organizations, and research institutions, further enhances market attractiveness. Additionally, the region's willingness to pay for premium digital services supports the freemium and subscription-based business models, boosting revenue potential. In contrast, Asia-Pacific is poised for the fastest growth during the forecast period, fueled by rising smartphone penetration, government-led afforestation initiatives, and expanding interest in smart agriculture. The region's large population base, increasing digital literacy, and focus on sustainability create immense opportunities for market expansion.

### 3.6 GLOBAL PLANT IDENTIFICATION APPS MARKET ATTRACTIVENESS ANALYSIS, BY TYPE

**FIGURE 10** GLOBAL PLANT IDENTIFICATION APPS MARKET ATTRACTIVENESS ANALYSIS, BY TYPE



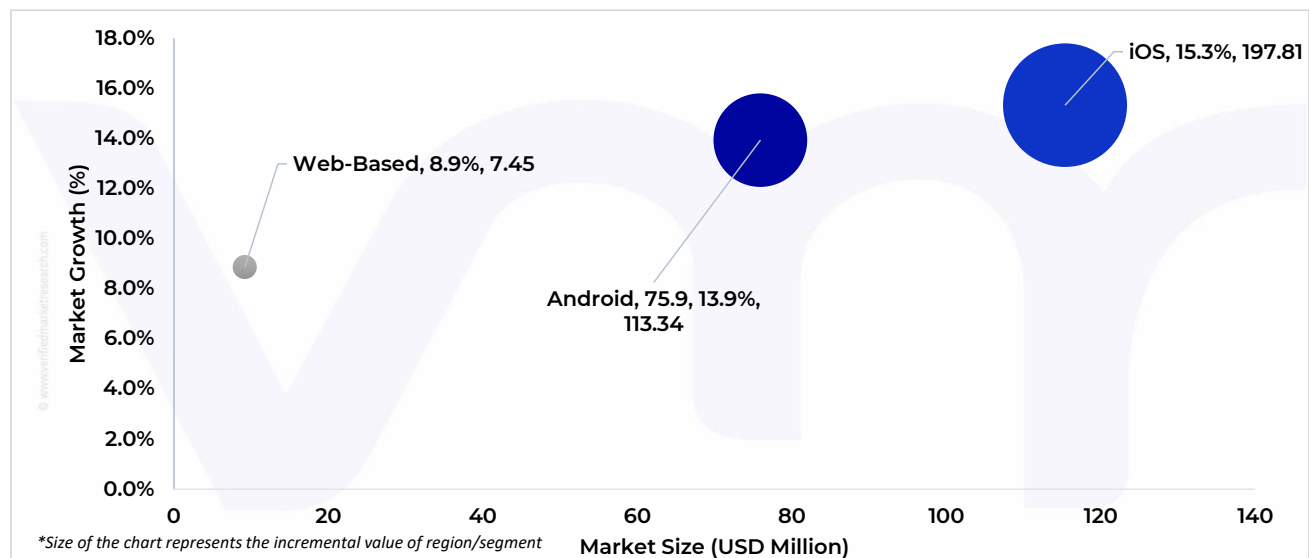
Source: Verified Market Research

The freemium model dominates the global plant identification apps market, making it the most lucrative segment due to its accessibility and wide user base. Offering free basic identification features while monetizing advanced functionalities through subscriptions, this model appeals to casual users, gardening enthusiasts, and educational institutions. The ability to scale rapidly with AI-driven improvements and cloud-based data storage enhances its market potential, driving significant user engagement and recurring revenue streams. However, the paid apps segment is expected to grow at a rapid pace during the forecast period, driven by increasing demand for professional-grade tools with higher accuracy, offline functionality, and premium database access. As agricultural professionals, researchers, and conservationists seek more reliable plant identification solutions, the willingness to invest in standalone paid applications is increasing.



### 3.7 GLOBAL PLANT IDENTIFICATION APPS MARKET ATTRACTIVENESS ANALYSIS, BY PLATFORM

**FIGURE 11 GLOBAL PLANT IDENTIFICATION APPS MARKET ATTRACTIVENESS ANALYSIS, BY PLATFORM**

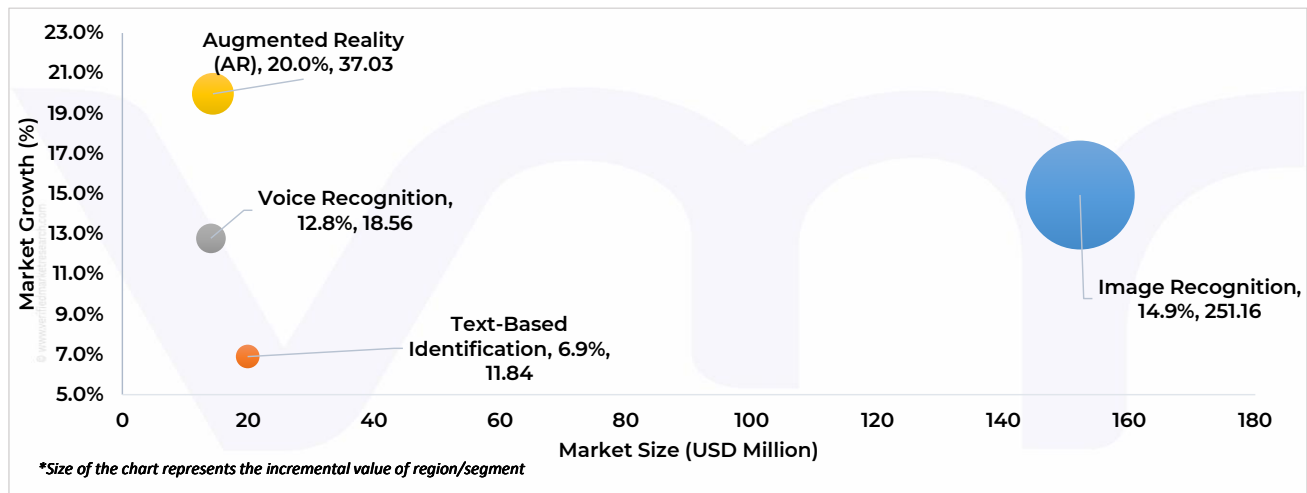


Source: Verified Market Research

The iOS platform is expected to remain the most lucrative segment in the global plant identification apps market during the forecast period, primarily due to the high spending capacity of Apple users and the platform's strong ecosystem for premium applications. The iOS App Store has a well-established user base that is more inclined toward subscription-based and paid applications, driving higher revenue generation for plant identification app developers. Additionally, iOS users often prioritize high-quality software with seamless integration, which aligns well with the advanced AI-driven functionalities offered by leading plant identification applications. While Android holds a larger market share globally, its revenue potential is comparatively lower due to a higher prevalence of free apps and ad-supported models. However, as AI-powered plant recognition tools continue to evolve, cross-platform compatibility and cloud synchronization features will enhance the overall user experience, ensuring sustained demand across both operating systems, with iOS maintaining its revenue leadership.

### 3.8 GLOBAL PLANT IDENTIFICATION APPS MARKET ATTRACTIVENESS ANALYSIS, BY FUNCTIONALITY

**FIGURE 12 GLOBAL PLANT IDENTIFICATION APPS MARKET ATTRACTIVENESS ANALYSIS, BY FUNCTIONALITY**

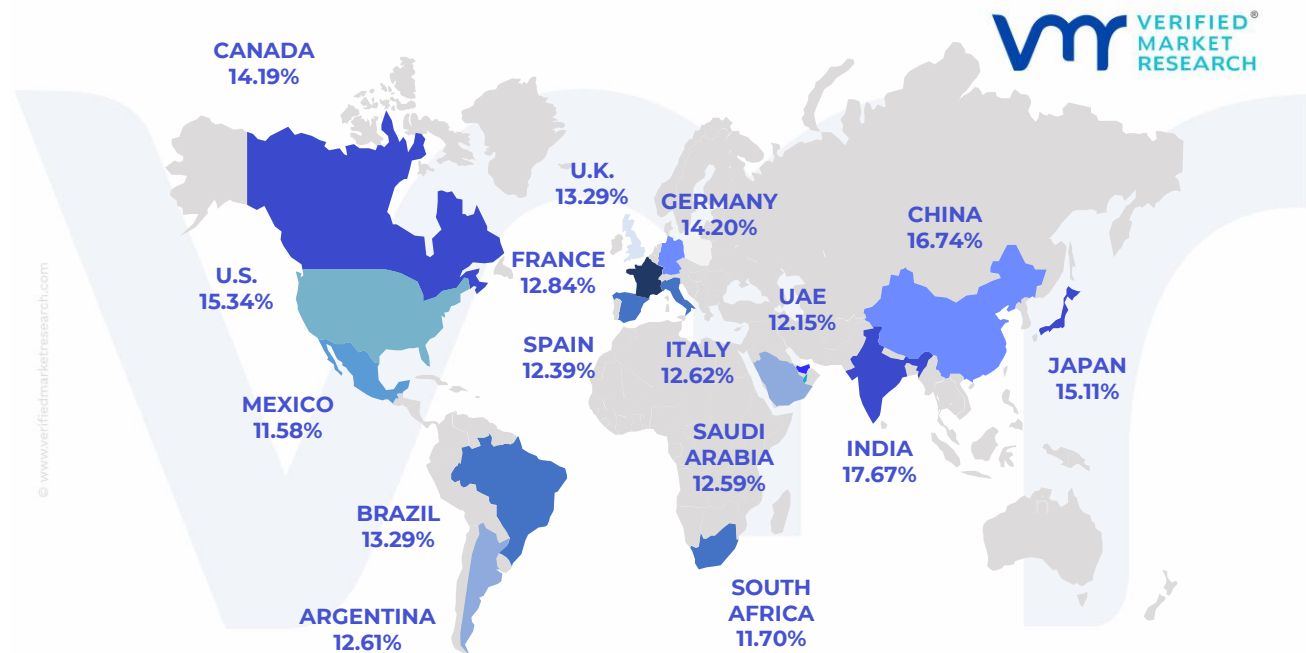


Source: Verified Market Research

Image recognition remains the most lucrative functionality in the global plant identification apps market, as it forms the foundation of most applications, leveraging AI and deep learning to provide accurate plant identification. The widespread use of smartphone cameras and advancements in machine learning algorithms have significantly improved identification accuracy, making image-based recognition the preferred choice among users ranging from gardening enthusiasts to researchers. The ease of capturing and analyzing plant images in real-time has driven high adoption rates, ensuring sustained market dominance. However, augmented reality (AR) is expected to grow at a rapid pace during the forecast period, driven by its ability to provide immersive, real-time plant interactions. AR-powered identification offers enhanced user engagement by overlaying digital information onto real-world environments, making it highly valuable for education, research, and smart gardening applications.

### 3.9 GLOBAL PLANT IDENTIFICATION APPS MARKET GEOGRAPHICAL ANALYSIS (CAGR %)

**FIGURE 13** GLOBAL PLANT IDENTIFICATION APPS MARKET GEOGRAPHICAL ANALYSIS, 2025-30

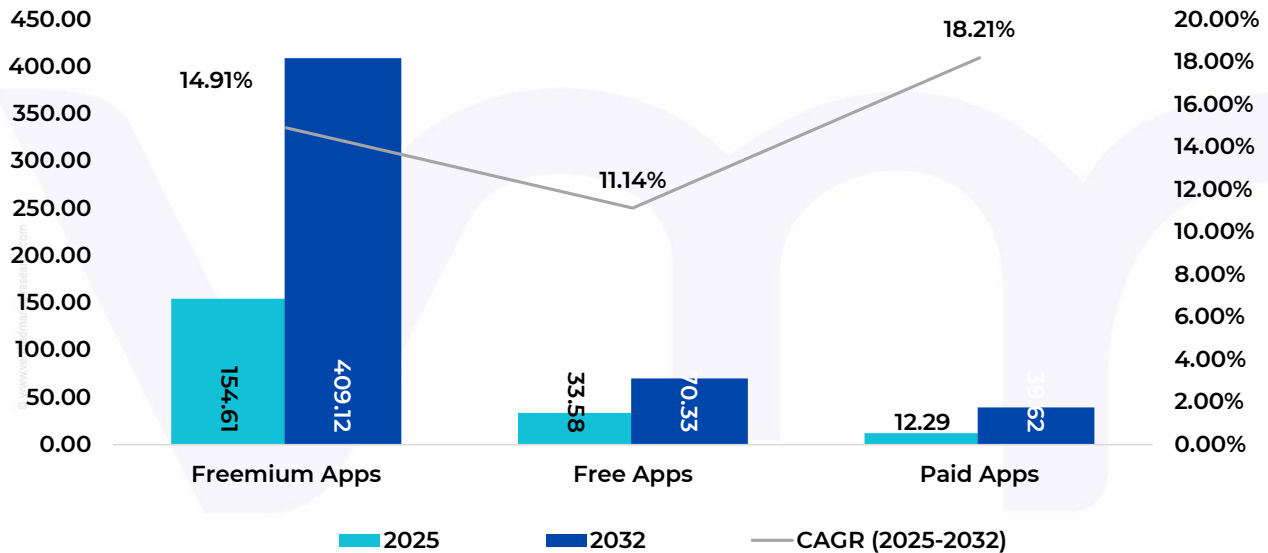


Source: Verified Market Research

North America accounted for the largest market share of 37.66% in 2024, with a market Value of USD 66.26 Million and is projected to grow at a CAGR of 15.00% during the forecast period. Europe was the second-largest market in 2024, Value of USD 52.26 Million in 2024; it is projected to grow at a CAGR of 13.07%. However, Asia Pacific is projected to grow at the highest CAGR of 16.28%.

### 3.10 GLOBAL PLANT IDENTIFICATION APPS MARKET, BY TYPE (USD MILLION)

**FIGURE 14** GLOBAL PLANT IDENTIFICATION APPS MARKET, BY TYPE (USD MILLION)

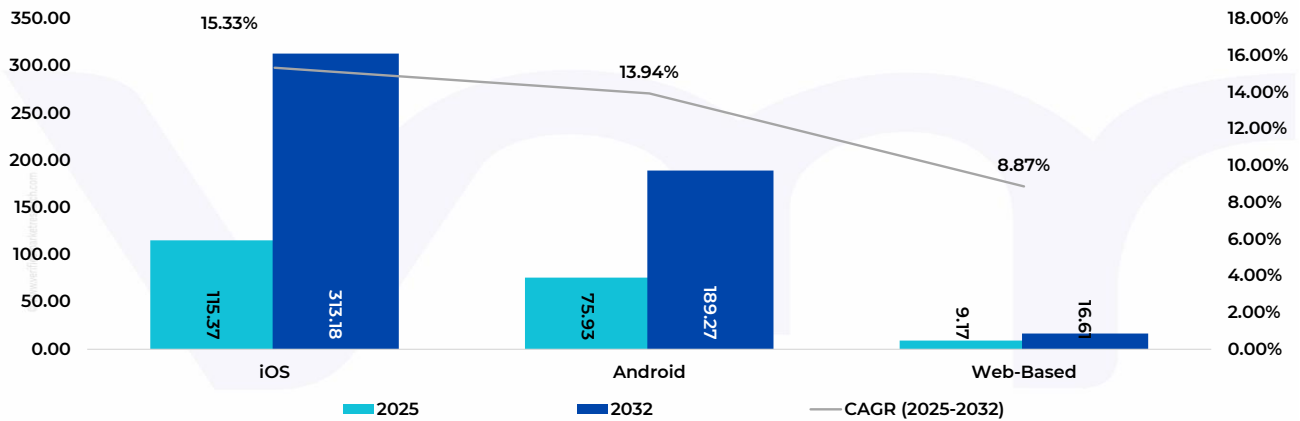


Source: Verified Market Research, e-Estimated & p-Projected

Freemium Apps accounted for the largest market share of 76.88% in 2024, with a market Value of USD 135.24 Million and is projected to grow at a CAGR of 14.91% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 30.38 Million in 2024; it is projected to grow at a CAGR of 11.14%. However, Paid Apps is projected to grow at the highest CAGR of 18.21%.

### 3.11 GLOBAL PLANT IDENTIFICATION APPS MARKET, BY PLATFORM (USD MILLION)

**FIGURE 15** GLOBAL PLANT IDENTIFICATION APPS MARKET, BY PLATFORM (USD MILLION)

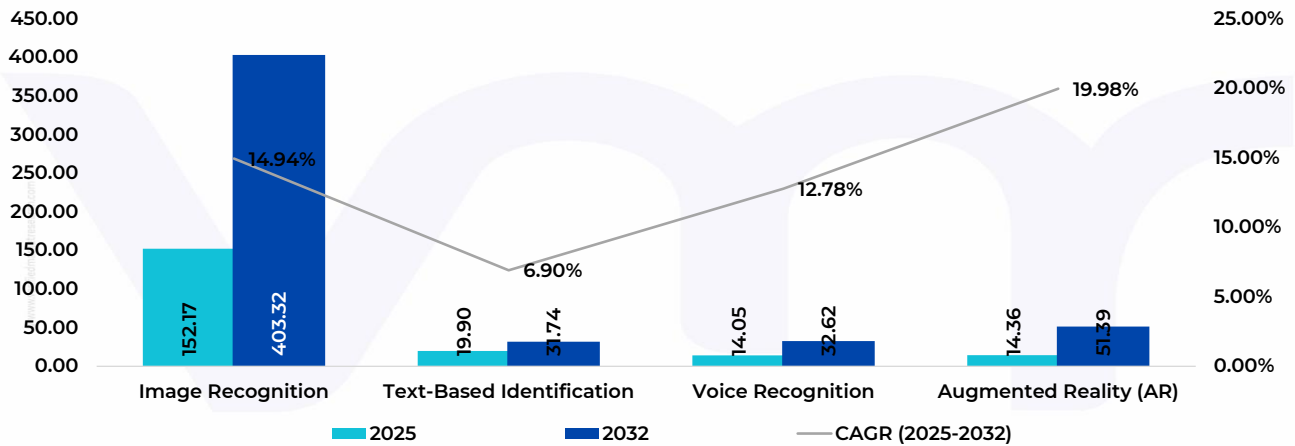


Source: Verified Market Research, e-Estimated & p-Projected

iOS accounted for the largest market share of 57.16% in 2024, with a market Value of USD 100.56 Million and is projected to grow at the highest CAGR of 15.33% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 67.00 Million in 2024; it is projected to grow at a CAGR of 13.94%.

### 3.12 GLOBAL PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY (USD MILLION)

**FIGURE 16** GLOBAL PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY (USD MILLION)

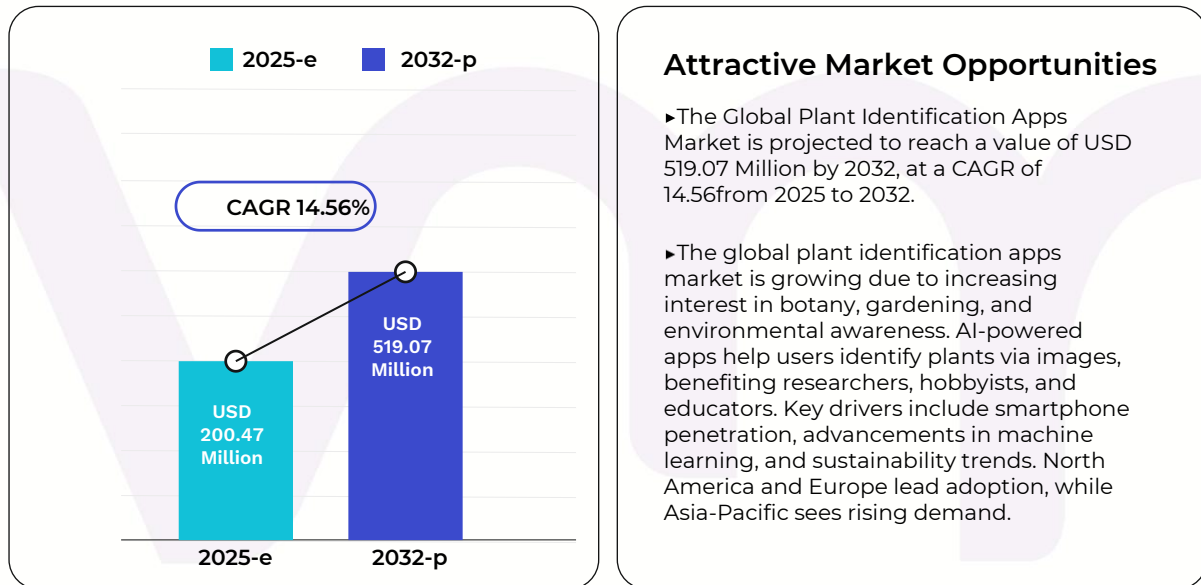


Source: Verified Market Research, e-Estimated & p-Projected

Image Recognition accounted for the largest market share of 75.65% in 2024, with a market Value of USD 133.08 Million and is projected to grow at a CAGR of 14.94% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD 18.71 Million in 2024; it is projected to grow at a CAGR of 6.90%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 19.98%.

### 3.13 FUTURE MARKET OPPORTUNITIES

FIGURE 17 FUTURE MARKET OPPORTUNITIES



Source: Verified Market Research, e-Estimated & p-Projected

The future market opportunities in the global plant identification apps market are driven by rapid advancements in artificial intelligence, increasing environmental awareness, and the integration of digital tools in agriculture, research, and conservation efforts. As AI-powered image recognition technology continues to improve, the accuracy and efficiency of plant identification apps are expected to reach near-professional levels, expanding their appeal to a broader user base, including botanists, ecologists, and agribusinesses. The growing trend of precision agriculture and smart farming presents a significant opportunity for these applications to integrate with IoT devices, offering real-time plant health analysis, soil condition monitoring, and pest detection. Furthermore, the rise of augmented reality (AR) and voice recognition in mobile applications is set to enhance user engagement, enabling interactive and immersive experiences for education and environmental awareness programs.

In addition to technological advancements, expanding smartphone penetration in emerging markets creates new opportunities, particularly in regions where traditional botanical knowledge is less accessible. Governments and non-profit organizations focused on afforestation, biodiversity conservation, and climate change mitigation are increasingly leveraging digital plant identification tools to support large-scale ecological projects.

Moreover, the increasing popularity of citizen science initiatives, where users contribute plant data to global biodiversity databases, offers a pathway for continuous improvement in app accuracy and functionality. The commercialization of premium features, such as offline access, expert consultations, and personalized plant care recommendations, will further drive revenue growth.





## 4 MARKET OUTLOOK

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### 4.1 GLOBAL PLANT IDENTIFICATION APPS MARKET EVOLUTION

The global plant identification apps market has evolved significantly over the past decade, driven by advancements in artificial intelligence, machine learning, and the widespread adoption of smartphones.

Early 2000s – Emergence of Digital Botanical Databases:

- Initial efforts in plant identification relied on manually curated online botanical databases, enabling users to search for plant species based on textual descriptions and simple image libraries. These platforms laid the foundation for digital plant identification.

2010 – Introduction of First-Generation Mobile Plant ID Apps:

- The launch of early plant identification apps introduced basic keyword searches and manual photo comparisons. Limited accuracy and small-scale databases restricted their widespread adoption

2015 – Integration of AI and Deep Learning in Image Recognition:

- Machine learning algorithms began revolutionizing plant identification, significantly improving accuracy and enabling apps to recognize plants based on patterns in leaf shape, flower color, and growth characteristics.

2017 – Rise of Freemium Models and Subscription-Based Revenue Streams:

- The market saw a shift toward freemium apps, where users could access basic identification features for free while paying for premium functionalities such as plant disease diagnosis, offline access, and expert consultations.

2018 – Expansion into Smart Agriculture and Environmental Conservation:

- Plant identification apps began integrating with IoT-based smart farming solutions, providing real-time insights on crop health, soil conditions, and pest control for commercial agriculture and conservation efforts.

#### 2020 – Augmented Reality (AR) Enhancements for Interactive Learning:

- AR-based plant identification features gained popularity, allowing users to overlay plant information on real-world environments. This development improved engagement, especially in educational and research applications.

#### 2021 – Integration with Citizen Science Initiatives:

- Leading plant identification apps started collaborating with environmental organizations, allowing users to contribute plant data to global biodiversity tracking projects. These initiatives enhanced AI accuracy by expanding plant species databases.

#### 2022 – Increasing Government and Institutional Adoption:

- Governments and research institutions began leveraging plant identification apps for large-scale afforestation projects, biodiversity assessments, and ecological monitoring, further validating their credibility.

#### 2023 – Growth in Emerging Markets and AI-Powered Real-Time Identification:

- Rising smartphone penetration in Asia-Pacific, Africa, and Latin America fueled app adoption, with improved AI algorithms enabling real-time plant recognition with near-professional accuracy.

#### Future Outlook – Advanced AI, Cross-Platform Integration, and Sustainability Applications:

- Continued advancements in AI, cloud computing, and multi-platform compatibility will drive market growth, with increased adoption in sustainable agriculture, climate change mitigation, and plant disease management.

## 4.2 GLOBAL PLANT IDENTIFICATION APPS MARKET OUTLOOK

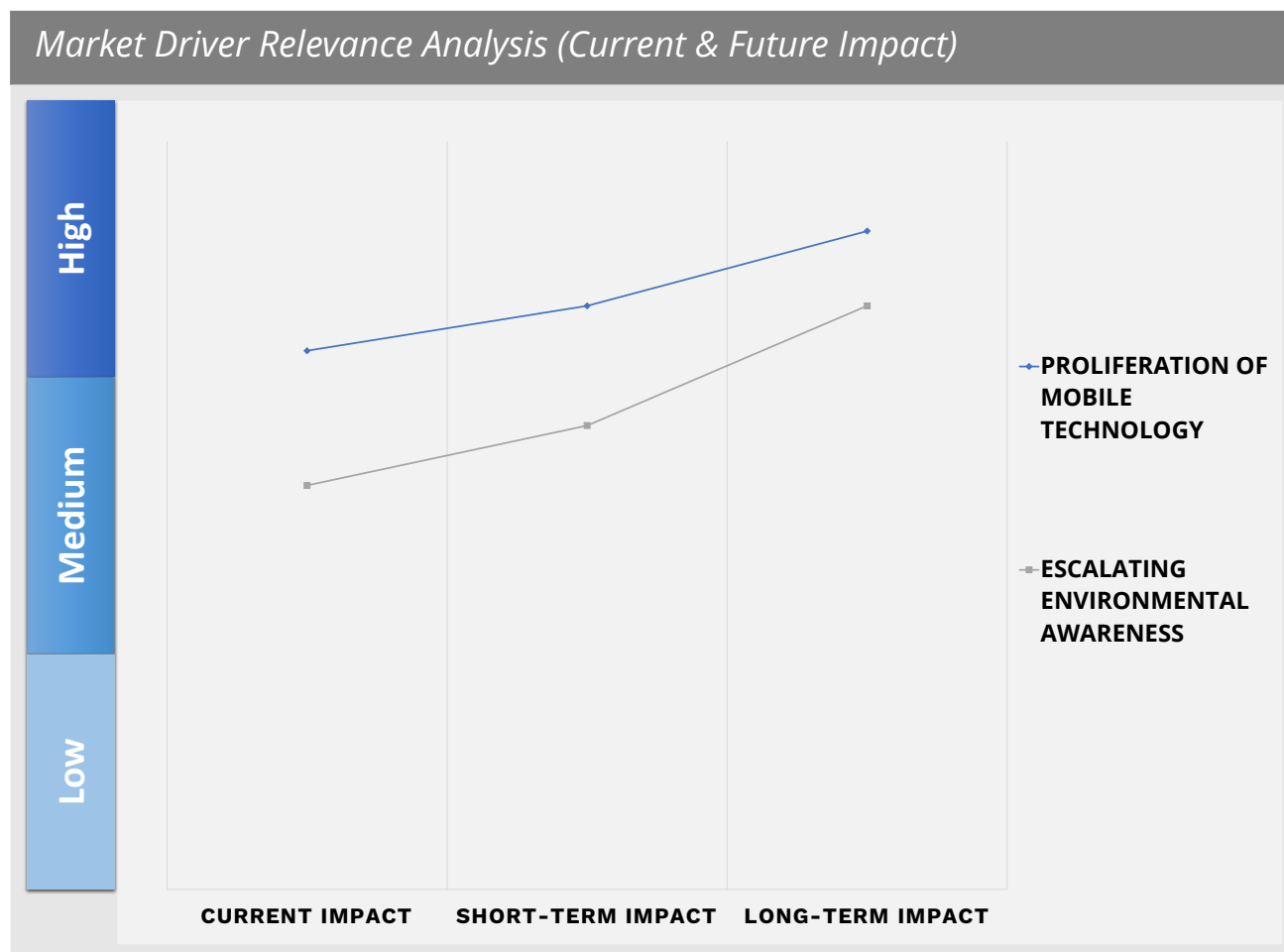
*FIGURE 18 GLOBAL PLANT IDENTIFICATION APPS MARKET OUTLOOK*



Source: Verified Market Research

### 4.3 MARKET DRIVERS

FIGURE 19 MARKET DRIVERS\_IMPACT ANALYSIS



#### 4.3.1 PROLIFERATION OF MOBILE TECHNOLOGY

The proliferation of mobile technology has been a significant catalyst for the growth of plant identification applications globally. According to the International Telecommunication Union (ITU), as of 2024, four out of five individuals aged 10 years or older own a mobile phone, with high-income economies achieving a penetration rate exceeding 95%. This widespread mobile device ownership has created a vast potential user base for mobile applications, including those designed for plant identification. The accessibility of smartphones enables users to utilize these applications in real-time, facilitating immediate identification of flora during outdoor activities such as hiking, gardening, or field research. This convenience has contributed to the increased adoption and popularity of plant identification apps.

The integration of advanced technologies such as artificial intelligence (AI) and machine learning into these applications has further enhanced their accuracy and user experience. AI-driven image recognition allows users to obtain precise information about various plant species by simply capturing images with their mobile devices. This technological advancement has broadened the appeal of plant identification apps to a diverse audience, including students, educators, researchers, and nature enthusiasts.

The growing environmental awareness and interest in biodiversity conservation have also played a role in the proliferation of these applications. Users are increasingly seeking tools that enable them to engage with and learn about their natural surroundings, and plant identification apps serve this purpose effectively. The ability to identify plants accurately contributes to educational endeavors and supports citizen science initiatives aimed at monitoring and preserving biodiversity.

### 4.3.2 ESCALATING ENVIRONMENTAL AWARENESS

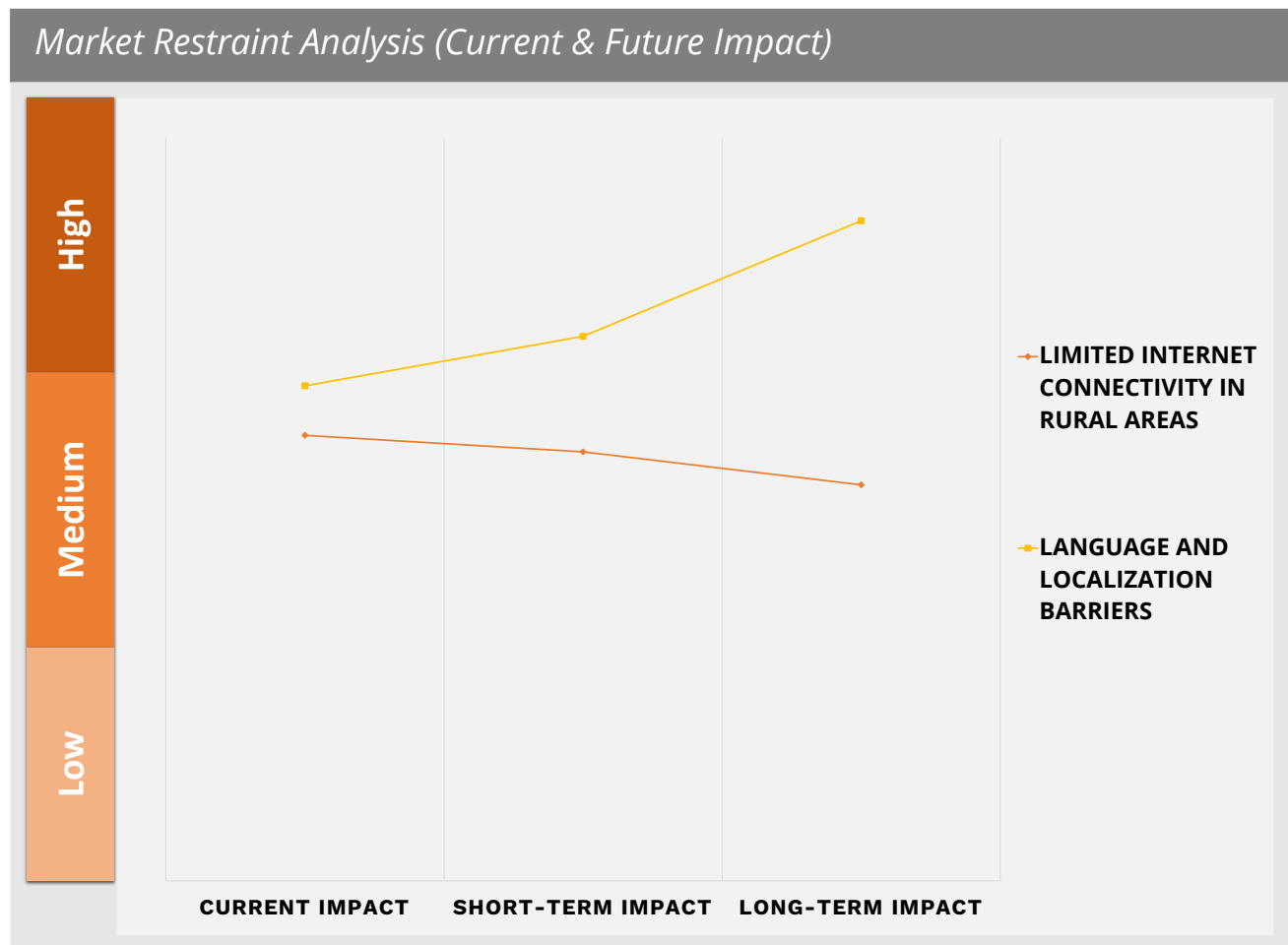
The escalating global environmental awareness has significantly influenced the demand for tools that promote ecological education and conservation, including plant identification applications. The United Nations Environment Programme (UNEP) has emphasized the urgency of addressing environmental challenges such as climate change, biodiversity loss, and pollution. In its sixth Global Environment Outlook, UNEP called for immediate action to achieve the Sustainable Development Goals and adhere to international agreements like the Paris Agreement. This heightened environmental consciousness has led to a surge in demand for tools that promote ecological education and conservation, including plant identification apps, which empower users to engage with and protect their natural surroundings.

The widespread availability of plant identification apps has democratized access to botanical knowledge, enabling individuals to identify plant species effortlessly using their smartphones. This accessibility fosters a deeper connection with nature and encourages proactive participation in conservation efforts. For instance, the Flora Incognita app not only identifies plants but also uncovers large-scale ecological patterns, contributing to rapid detection of biodiversity changes. Such applications serve as valuable tools for both education and data collection, bridging the gap between the public and scientific communities.

Moreover, the integration of artificial intelligence (AI) in these apps has enhanced their accuracy and usability. AI-driven image recognition technology allows users to identify plant species with high precision, making these apps indispensable for researchers, educators, and nature enthusiasts. The continuous improvement of these technologies is expected to further drive the adoption of plant identification apps, aligning with the global trend towards environmental sustainability.

## 4.4 MARKET RESTRAINTS

FIGURE 20 MARKET RESTRAINTS\_IMPACT ANALYSIS





#### 4.4.1 LIMITED INTERNET CONNECTIVITY IN RURAL AREAS

Limited internet connectivity in rural areas poses a significant challenge to the widespread adoption of plant identification applications, potentially hindering the growth of this market during the forecast period. According to the International Telecommunication Union (ITU), as of 2023, approximately 2.6 billion people worldwide remain offline, representing 33% of the global population. This digital divide is particularly pronounced in low-income countries, where only 27% of the population uses the internet, compared to 93% in high-income countries. Furthermore, the GSMA's 2022 report indicates that in low- and middle-income countries (LMICs), adults in rural areas are 33% less likely to use mobile internet than those in urban areas.

Plant identification apps typically rely on internet access for real-time database queries, updates, and image recognition processes. In regions with limited connectivity, users may experience difficulties in accessing these functionalities, rendering the apps less effective or entirely unusable. This limitation is particularly acute in rural and remote areas, where biodiversity is often rich and the need for plant identification tools is substantial. The lack of reliable internet infrastructure in these regions restricts the potential user base of such applications, thereby impeding market expansion.

The disparity in mobile internet usage between urban and rural populations further exacerbates this issue. The GSMA report highlights that in LMICs, adults in rural areas are 33% less likely to use mobile internet than their urban counterparts. This urban-rural divide means that even within countries experiencing overall growth in internet adoption, rural communities remain underserved. Consequently, the adoption rate of plant identification apps in these areas remains low, limiting the overall market growth.

Efforts to bridge this digital divide are underway. For instance, the UK government has initiated a £289 million project to provide high-speed broadband to 131,000 households and businesses in rural England and Wales, as part of a broader £5 billion scheme to expand fast broadband coverage. Similarly, in Australia, the federal government's Independent Telecommunications Review Committee has acknowledged significant connectivity issues in remote and Indigenous communities, leading to recommendations for modernizing service obligations and utilizing satellites to improve coverage. While these initiatives are promising, their implementation is gradual, and many rural areas worldwide continue to experience inadequate internet access.

#### 4.4.2 LANGUAGE AND LOCALIZATION BARRIERS

The global proliferation of mobile technology has significantly influenced various sectors, including the market for plant identification applications. According to the International Telecommunication Union (ITU), as of 2024, four out of five individuals aged 10 years or older globally own a mobile phone, with high-income economies achieving a penetration rate exceeding 95%. This widespread mobile device ownership facilitates the accessibility and usability of plant identification applications, enabling users to identify flora in real-time, thereby driving market growth.

The extensive reach of mobile technology has democratized access to information, allowing users from diverse backgrounds to engage with plant identification tools. For instance, PlantSnap, a leading plant identification app, can identify over 600,000 plant species and is available in 37 languages, making it accessible to a broad user base. Similarly, PlantNet supports 45 languages, further enhancing its global usability. This linguistic inclusivity ensures that non-English speakers can effectively utilize these applications, fostering a more extensive adoption rate worldwide.

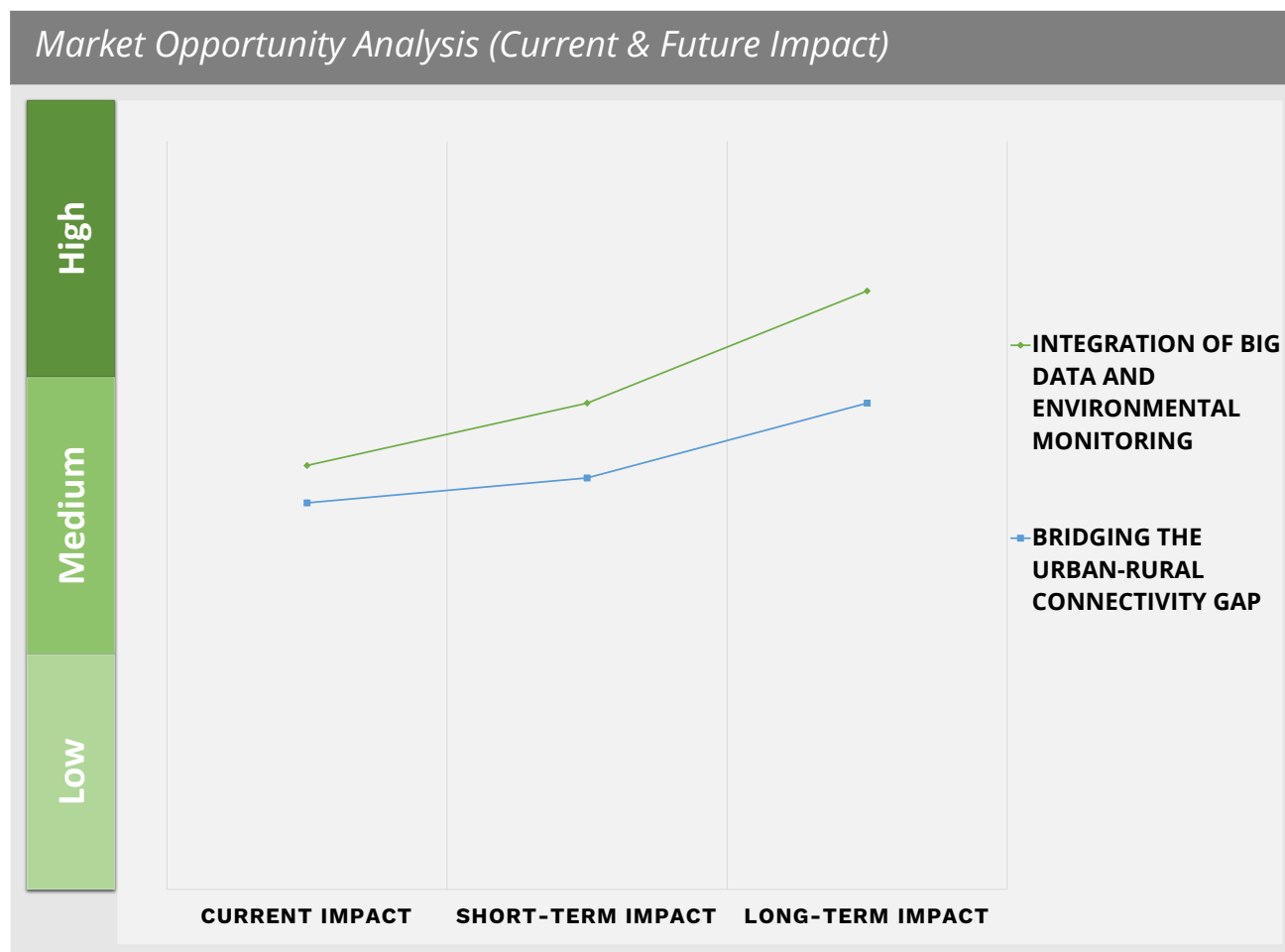
Moreover, the integration of artificial intelligence (AI) and machine learning technologies into mobile platforms has enhanced the accuracy and efficiency of plant identification apps. These advancements allow users to obtain instant results by simply capturing images of plants, streamlining the identification process and encouraging more users to engage with such applications.

In addition to individual users, educational institutions and environmental organizations leverage mobile technology to promote ecological awareness and conservation efforts. By incorporating plant identification apps into their programs, they provide interactive learning experiences that foster a deeper understanding of biodiversity among students and community members.

However, despite the widespread availability of mobile devices, challenges remain in ensuring equitable access to plant identification applications. Factors such as limited internet connectivity in rural areas and language barriers can hinder the effective use of these tools. Addressing these issues is crucial to fully realizing the potential of mobile technology in promoting environmental education and conservation.

## 4.5 MARKET OPPORTUNITIES

FIGURE 21 MARKET OPPORTUNITIES\_IMPACT ANALYSIS



#### 4.5.1 INTEGRATION OF BIG DATA AND ENVIRONMENTAL MONITORING

The integration of big data and environmental monitoring represents a pivotal advancement for plant identification applications, offering the potential to significantly enhance their functionalities and user engagement. The United Nations Environment Programme's (UNEP) Big Data Initiative emphasizes the importance of merging geo-referenced, remote-sensing, and earth observation data with environmental statistics to support informed decision-making and sustainable development.

By incorporating comprehensive environmental datasets, plant identification apps can transcend basic identification tasks, providing users with enriched information about plant species and their ecosystems. For instance, integrating data on soil composition, climate conditions, and biodiversity indices can offer users a holistic understanding of plant habitats and ecological roles. Such detailed insights not only enhance user experience but also promote environmental education and awareness.

This data integration is particularly beneficial for researchers and conservationists. Access to real-time, geo-referenced plant data facilitates large-scale ecological studies and biodiversity monitoring. For example, researchers can track the distribution of invasive species or monitor the health of specific plant populations over time. This capability aligns with UNEP's goal of utilizing big data for environmental foresight and early warning systems, aiding in the identification of emerging environmental issues.

Educators also stand to benefit from these advancements. Enhanced plant identification apps can serve as interactive teaching tools, allowing students to explore plant biology and ecology in a dynamic manner. By providing contextual environmental information, these apps can facilitate a deeper understanding of ecological interdependencies and the importance of conservation efforts.

The integration of big data further enables personalized user experiences. By analyzing user interactions and preferences, apps can offer tailored recommendations, such as suggesting nearby botanical gardens or notifying users about local conservation events. This personalization fosters increased user engagement and loyalty, contributing to the growth of the app's user base.

#### 4.5.2 BRIDGING THE URBAN-RURAL CONNECTIVITY GAP

The disparity between mobile phone ownership and internet usage in regions like Africa presents a unique opportunity for plant identification applications to expand their reach by incorporating offline functionalities. According to the International Telecommunication Union (ITU), as of 2024, 66% of the African population owns a mobile phone, yet only 38% are online, indicating a substantial gap of 28 percentage points. This significant divide underscores the necessity for applications that can operate effectively without relying on continuous internet connectivity.

Incorporating offline capabilities into plant identification apps can address this connectivity gap, making these tools more accessible to users in rural and remote areas. Offline functionality allows users to access essential features and content without an active internet connection, ensuring uninterrupted usage in regions with limited or unreliable network access. For instance, users can capture images of plants and receive identification results based on pre-downloaded databases, with the app synchronizing data once connectivity is restored.

The implementation of offline features not only enhances user experience but also expands the potential user base to include individuals in developing countries and rural areas where internet infrastructure may be lacking. By catering to these underserved markets, app developers can tap into a broader audience, fostering greater adoption and market expansion. This approach aligns with strategies to bridge the digital divide, ensuring that technological advancements benefit a wider population.

Moreover, offline functionality contributes to the reliability and resilience of plant identification apps. Users can continue to utilize the app's features without interruption, even in the absence of internet connectivity, which is particularly valuable in remote fieldwork or during travel in areas with poor network coverage. This seamless user experience can lead to increased user satisfaction and loyalty, further driving the growth of the app's user base.

## 4.6 MARKET TRENDS

### 4.6.1 INCREASING AGRICULTURAL DIGITALIZATION

The increasing digitalization of agriculture is transforming the sector by enhancing efficiency, sustainability, and accessibility. According to the Food and Agriculture Organization (FAO), digital agriculture is reshaping farming practices through the integration of mobile applications that support rural development. These mobile agricultural and rural development (m-ARD) apps are playing a crucial role in providing farmers and rural communities with affordable access to real-time information on crop management, weather forecasting, pest control, and soil health.

The World Bank highlights that the adoption of digital tools in agriculture has significantly expanded, with mobile-based solutions now widely used to bridge the gap between smallholder farmers and essential services, such as market access and financial inclusion. In developing regions, where traditional extension services may be limited, digital platforms have become a primary source of agricultural knowledge. Governments and international organizations have recognized the potential of digitalization in agriculture, leading to increased investments in digital infrastructure and mobile connectivity. FAO data indicates that global mobile penetration in rural areas has risen steadily, allowing small-scale farmers to leverage technology for better decision-making. Furthermore, initiatives such as the Digital Agriculture Platforms launched by various countries have contributed to strengthening digital ecosystems in the agricultural sector. This shift toward mobile-driven agricultural solutions presents a substantial opportunity for plant identification apps to integrate with existing platforms and provide farmers with tools for species recognition, disease detection, and biodiversity monitoring. By incorporating artificial intelligence and machine learning, plant identification applications can assist in identifying crop species and detecting plant health conditions, enabling farmers to take preventive actions against diseases and pests.

Additionally, the rise in precision agriculture, which relies on data-driven insights for optimal resource allocation, further strengthens the demand for advanced digital tools. The FAO emphasizes that digitalization not only increases productivity but also promotes sustainable farming practices by reducing resource wastage and improving land management. As more farmers adopt digital solutions, plant identification apps can play a vital role in improving agricultural sustainability by offering scientifically backed data on plant species, enabling better crop selection, and supporting biodiversity conservation effort.

## 4.7 PORTER'S FIVE FORCES ANALYSIS

Porter's Five Forces Analysis provides a comprehensive framework for assessing the competitive dynamics and market attractiveness of the Plant Identification Apps market, considering factors such as the bargaining power of buyers and suppliers, the threat of new entrants, the threat of substitutes, and the intensity of competitive rivalry

FIGURE 22 PORTER'S FIVE FORCES ANALYSIS



Source: Verified Market Research

#### 4.7.1 THREAT OF NEW ENTRANTS – MEDIUM

The plant identification apps market is characterized by moderate entry barriers. While the development of a basic identification app requires relatively low capital investment, the challenge lies in building a comprehensive and accurate plant database, integrating advanced artificial intelligence (AI) and machine learning (ML) capabilities, and ensuring a seamless user experience. According to the World Intellectual Property Organization (WIPO), AI-based innovations in agriculture and biodiversity monitoring have surged, increasing the need for proprietary algorithms and data-driven differentiation. Established players have already secured vast image datasets and user trust, making it difficult for newcomers to compete effectively without unique value propositions.

#### 4.7.2 BARGAINING POWER OF SUPPLIERS – LOW

The primary suppliers for plant identification apps include database providers, cloud service vendors, and AI/ML technology developers. Given the availability of multiple cloud computing services and open-source AI frameworks, the dependency on any single supplier remains low. Reports from the International Telecommunication Union (ITU) indicate a growing number of AI developers and cloud infrastructure providers, reducing supplier power. Additionally, partnerships with universities and botanical organizations for plant data collection further diversify supply sources, keeping costs and dependency manageable.

#### 4.7.3 BARGAINING POWER OF BUYERS – HIGH

Users have significant bargaining power due to the availability of multiple free and freemium plant identification apps in the market. With minimal switching costs, consumers can easily shift between different applications based on features, accuracy, and user experience. According to the International Union for Conservation of Nature (IUCN), growing environmental awareness is driving demand for plant identification tools, yet users expect high precision, seamless functionality, and offline capabilities. The proliferation of free apps with AI-powered identification further strengthens consumer power, pushing developers to continuously enhance app accuracy and user engagement to retain a competitive edge.

#### 4.7.4 THREAT OF SUBSTITUTES – MEDIUM

The availability of alternative methods for plant identification, such as physical field guides, botanical books, and professional consultation, presents a moderate substitution threat.



While mobile applications offer real-time, AI-based identification, traditional methods remain relevant in academic and conservation fields. The United Nations Environment Programme (UNEP) highlights the importance of botanical literacy and field research in biodiversity conservation, suggesting that plant identification apps must complement rather than replace conventional approaches. However, continuous improvements in AI, augmented reality (AR), and database accuracy are reducing dependency on substitutes.

#### 4.7.5 INDUSTRY RIVALRY – HIGH

The market for plant identification apps is highly competitive, with numerous players offering similar functionalities. As per the World Economic Forum (WEF), digital ecosystems are rapidly expanding, intensifying competition in mobile applications. The presence of global and regional app developers, coupled with open-source image recognition technology, contributes to high market rivalry. Companies focus on differentiating their offerings through enhanced AI capabilities, AR integration, multilingual support, and gamification features to retain users and drive engagement. The frequent launch of new features and aggressive marketing strategies further fuel industry rivalry, making innovation and user experience critical success factors.

#### 4.8 VALUE CHAIN ANALYSIS

The value chain of plant identification apps comprises multiple interdependent stages, from data collection and AI development to end-user experience.

##### Data Collection and Curation

- A robust plant identification app relies on an extensive and diverse dataset of plant images, descriptions, and taxonomy. Partnerships with universities, botanical gardens, and conservation organizations facilitate data acquisition. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), global biodiversity databases are expanding, allowing AI models to train on increasingly comprehensive plant datasets. The quality and accuracy of collected data are critical for app reliability and user trust.

##### AI and Machine Learning Model Development

- Machine learning algorithms and AI-powered image recognition technologies form the core of plant identification apps. The International Telecommunication Union (ITU) reports that advancements in AI have significantly improved object detection and classification accuracy. Developers continuously refine AI models using deep

learning techniques, ensuring high precision in recognizing plant species based on leaves, flowers, and bark patterns. Cloud-based AI services enhance processing speed and scalability.

#### App Development and User Interface Design

- The development stage involves integrating AI models into mobile and web-based applications while ensuring a seamless user interface (UI) and experience (UX). The World Wide Web Consortium (W3C) highlights the importance of accessible design, emphasizing multilingual support and offline functionality to cater to diverse user demographics. Intuitive UI, real-time feedback, and interactive features enhance user engagement and retention.

#### Cloud Infrastructure and Data Processing

- Cloud-based platforms store and process vast amounts of plant data, enabling real-time identification. The International Data Corporation (IDC) notes that cloud adoption in mobile applications is increasing, allowing plant identification apps to manage high-resolution images and complex AI models efficiently. Secure cloud storage and decentralized processing improve app performance and scalability.

#### User Engagement and Community Contributions

- Crowdsourced data and user-generated content contribute to the app's accuracy and growth. Users can upload plant images, provide feedback, and share location-based findings. The United Nations Environment Programme (UNEP) emphasizes the role of citizen science in biodiversity tracking, indicating that user participation enhances database expansion and real-time ecological monitoring.

#### Monetization and Market Expansion

- Revenue generation strategies vary across free, freemium, and paid models. Subscription-based premium features, in-app advertisements, and partnerships with environmental agencies provide monetization opportunities. The World Economic Forum (WEF) reports that the digital ecosystem's expansion fosters new business models, including collaborations with agritech and eco-tourism sectors. Continuous innovation and strategic partnerships drive long-term market sustainability.

## 4.9 PRICING ANALYSIS

The pricing of plant identification apps varies significantly based on their type, functionality, and monetization model. Freemium apps dominate the market, allowing users free access to basic features while charging for advanced functionalities such as offline identification, unlimited searches, and detailed plant care guides. Typically, premium subscriptions for these apps range from \$2.99 to \$9.99 per month or \$19.99 to \$59.99 annually, depending on the level of AI accuracy, database size, and additional ecological insights. Free apps, which rely primarily on advertising revenue, offer basic plant identification with limited access to in-depth botanical information. While these apps attract a broad user base, their reliance on ads may impact user experience, leading to lower retention rates. Paid apps, which require a one-time purchase, generally range from \$4.99 to \$29.99, catering to users seeking an ad-free experience with reliable offline capabilities. The higher-end pricing within this segment is often justified by superior AI-driven recognition, extensive plant databases, and integration with professional research tools. According to digital payment adoption trends reported by the International Telecommunication Union (ITU), consumers are increasingly willing to pay for subscription-based applications, particularly those offering educational and conservation-related value.

## 4.10 MACROECONOMIC ANALYSIS

According to the United Nations DESA, the outbreak of COVID-19 has disrupted the global supply chains and international trade. With nearly 100 countries closing national borders in March, the movement of people and tourism flows has come to a halt. Temporary closure of industries, disruptions in the supply chain, and limited workforce have resulted in hindrance in the production capabilities of Functionality industries. This has directly affected the GDP of countries.

**TABLE 1 PROJECTED REAL GDP GROWTH (ANNUAL PERCENTAGE CHANGE) OF KEY COUNTRIES**

Region	Country	2021	2023	2024	2025	2026	2026	2027	2028	2029	2030	2032	2032
North America	US	6.86%	3.56%	1.93%	1.58%	1.57%	1.60%	1.62%	1.63%	1.61%	1.59%	1.60%	1.60%
	Canada	6.13%	3.75%	2.30%	1.84%	1.67%	1.59%	1.55%	1.53%	1.51%	1.50%	1.60%	1.60%
	Mexico	4.98%	3.18%	4.75%	4.31%	3.66%	3.17%	2.83%	2.64%	2.52%	2.45%	3.08%	3.08%
Europe	Germany	3.30%	4.41%	1.91%	1.07%	0.78%	0.68%	0.65%	0.65%	0.65%	0.65%	0.73%	0.73%
	UK	7.23%	5.52%	2.33%	1.50%	1.31%	1.29%	1.31%	1.32%	1.32%	1.31%	1.34%	1.34%
	Italy	4.46%	4.39%	1.67%	0.96%	0.81%	0.80%	0.81%	0.83%	0.82%	0.80%	0.83%	0.83%
	Spain	5.86%	6.26%	2.68%	1.89%	1.83%	1.86%	1.82%	1.77%	1.72%	1.65%	1.79%	1.79%
	France	5.79%	3.96%	1.94%	1.39%	1.25%	1.23%	1.24%	1.24%	1.24%	1.23%	1.26%	1.26%
	Netherlands	2.58%	2.51%	2.45%	2.39%	2.34%	2.28%	2.23%	2.19%	2.14%	2.10%	2.32%	2.32%
	Denmark	6.80%	2.70%	1.01%	1.00%	0.99%	0.98%	0.97%	0.96%	0.95%	0.94%	0.93%	2.00%

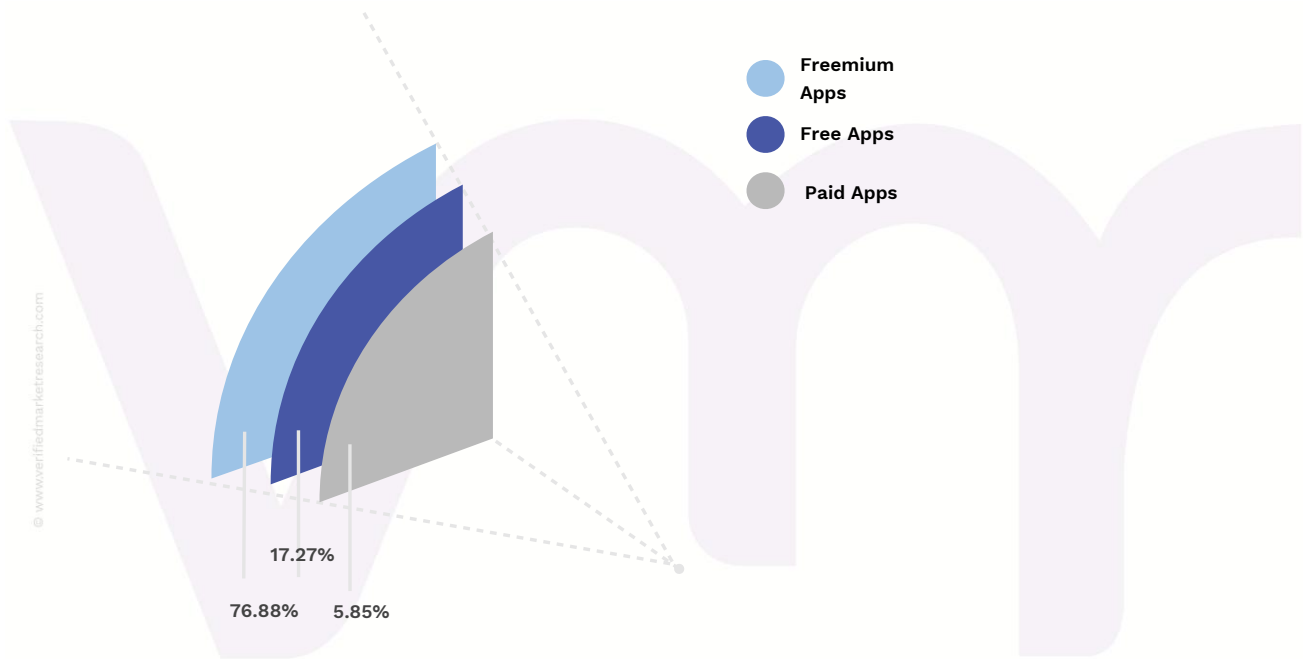
	Sweden	2.85%	2.77%	2.69%	2.60%	2.52%	2.45%	2.38%	2.31%	2.25%	2.20%	2.50%	2.50%
	Hungary	1.79%	1.82%	1.85%	1.86%	1.89%	1.92%	1.96%	2.00%	2.01%	2.02%	1.91%	1.91%
	Iceland	1.83%	1.97%	2.09%	2.18%	2.26%	2.32%	2.38%	2.42%	2.45%	2.48%	2.24%	2.24%
	Ireland	2.87%	2.94%	3.00%	3.04%	3.05%	3.02%	2.93%	2.82%	2.70%	2.56%	2.89%	2.89%
	Luxembourg	2.36%	2.27%	2.20%	2.15%	2.10%	2.06%	2.02%	1.98%	1.94%	1.90%	2.10%	2.10%
	Norway	2.43%	2.30%	2.19%	2.10%	2.03%	1.99%	1.95%	1.92%	1.90%	1.87%	2.07%	2.07%
	Poland	2.23%	2.11%	2.00%	1.90%	1.82%	1.75%	1.69%	1.64%	1.60%	1.55%	1.83%	1.83%
	Portugal	1.34%	1.44%	1.59%	1.75%	1.92%	2.10%	2.28%	2.46%	2.62%	2.74%	2.02%	2.02%
	Slovakia	3.05%	2.87%	2.70%	2.55%	2.42%	2.30%	2.20%	2.12%	2.03%	1.95%	2.42%	2.42%
	Switzerland	2.21%	2.17%	2.13%	2.10%	2.06%	2.04%	2.01%	2.00%	1.98%	1.97%	2.07%	2.07%
	Estonia	3.16%	2.95%	2.77%	2.63%	2.53%	2.41%	2.31%	2.25%	2.21%	2.18%	2.54%	2.54%
	Russia	2.95%	2.87%	2.83%	2.80%	2.78%	2.76%	2.74%	2.70%	2.65%	2.57%	2.76%	2.76%
	Slovenia	2.21%	2.14%	2.09%	2.06%	2.05%	2.06%	2.07%	2.10%	2.12%	2.15%	2.11%	2.11%
	Greece	8.70%	6.20%	1.34%	1.32%	1.30%	1.29%	1.27%	1.26%	1.24%	1.22%	1.21%	1.20%
	Finland	2.73%	1.45%	5.94%	5.76%	5.45%	5.17%	4.91%	4.68%	4.47%	4.28%	4.11%	4.48%
	Rest of Europe	3.80%	4.27%	2.85%	2.26%	1.99%	1.83%	1.72%	1.63%	1.54%	1.47%	1.78%	1.78%
Asia Pacific	China	8.53%	5.80%	4.93%	4.48%	4.23%	4.03%	3.86%	3.69%	3.52%	3.35%	3.88%	3.88%
	Japan	2.63%	2.04%	1.11%	0.75%	0.58%	0.53%	0.54%	0.56%	0.58%	0.58%	0.59%	0.59%
	India	8.03%	9.53%	8.61%	7.59%	7.00%	6.58%	6.21%	5.89%	5.61%	5.35%	6.31%	6.31%
	South Korea	3.04%	2.94%	2.84%	2.73%	2.64%	2.54%	2.45%	2.37%	2.29%	2.21%	2.60%	2.60%
	Australia	3.45%	3.37%	3.32%	3.28%	3.25%	3.15%	3.13%	3.11%	3.07%	3.03%	3.22%	3.22%
	Hong Kong	3.40%	3.21%	3.06%	2.93%	2.82%	2.73%	2.67%	2.61%	2.53%	2.47%	2.84%	2.84%
	New Zealand	2.64%	2.64%	2.63%	2.61%	2.58%	2.56%	2.53%	2.51%	2.48%	2.46%	2.56%	2.56%
	Indonesia	5.66%	5.59%	5.51%	5.42%	5.33%	5.22%	5.11%	5.00%	4.89%	4.78%	5.25%	5.25%
	Southeast Asia	10.46%	7.88%	7.30%	6.80%	6.37%	5.99%	5.65%	5.35%	5.08%	4.83%	4.61%	4.41%
	Rest of Asia-Pacific	4.49%	4.06%	5.10%	4.75%	4.22%	3.80%	3.50%	3.31%	3.16%	3.04%	3.68%	3.68%
Latin America	Brazil	3.71%	2.51%	2.98%	2.81%	2.56%	2.37%	2.22%	2.12%	2.06%	2.01%	2.30%	2.30%
	Argentina	6.09%	1.82%	4.64%	4.30%	3.55%	2.96%	2.58%	2.36%	2.23%	2.15%	2.87%	2.87%
	Chile	4.93%	4.68%	4.44%	4.21%	3.99%	3.80%	3.62%	3.46%	3.32%	3.19%	3.96%	3.96%
	Colombia	10.80%	7.29%	0.61%	0.74%	0.73%	0.73%	0.72%	0.72%	0.71%	0.71%	0.70%	0.70%
	Rest of Latin America	6.90%	3.53%	3.67%	3.34%	3.00%	2.71%	2.49%	2.33%	2.21%	2.11%	2.60%	2.60%
Middle East and Africa	Saudi Arabia	2.80%	3.77%	3.96%	3.49%	2.86%	2.39%	2.16%	2.05%	1.98%	1.92%	2.41%	2.41%
	South Africa	3.78%	2.50%	5.11%	4.89%	4.25%	3.73%	3.39%	3.20%	3.10%	3.04%	3.65%	3.65%
	UAE	3.59%	3.44%	3.30%	3.16%	3.04%	2.92%	2.82%	2.72%	2.63%	2.53%	2.83%	2.83%
	Turkey	4.39%	4.23%	4.13%	4.06%	3.99%	3.93%	3.86%	3.79%	3.71%	3.63%	3.97%	3.97%
	Israel	3.08%	3.07%	3.07%	3.07%	3.07%	3.08%	3.08%	3.07%	3.06%	3.04%	3.07%	3.07%
	Rest of MEA	4.97%	4.90%	4.85%	4.80%	4.75%	4.68%	4.60%	4.52%	4.42%	4.31%	4.58%	4.58%

Source: International Monetary Fund

## 5 MARKET, BY TYPE

### 5.1 OVERVIEW

**FIGURE 23** GLOBAL PLANT IDENTIFICATION APPS MARKET, BY TYPE, VALUE SHARES IN 2024



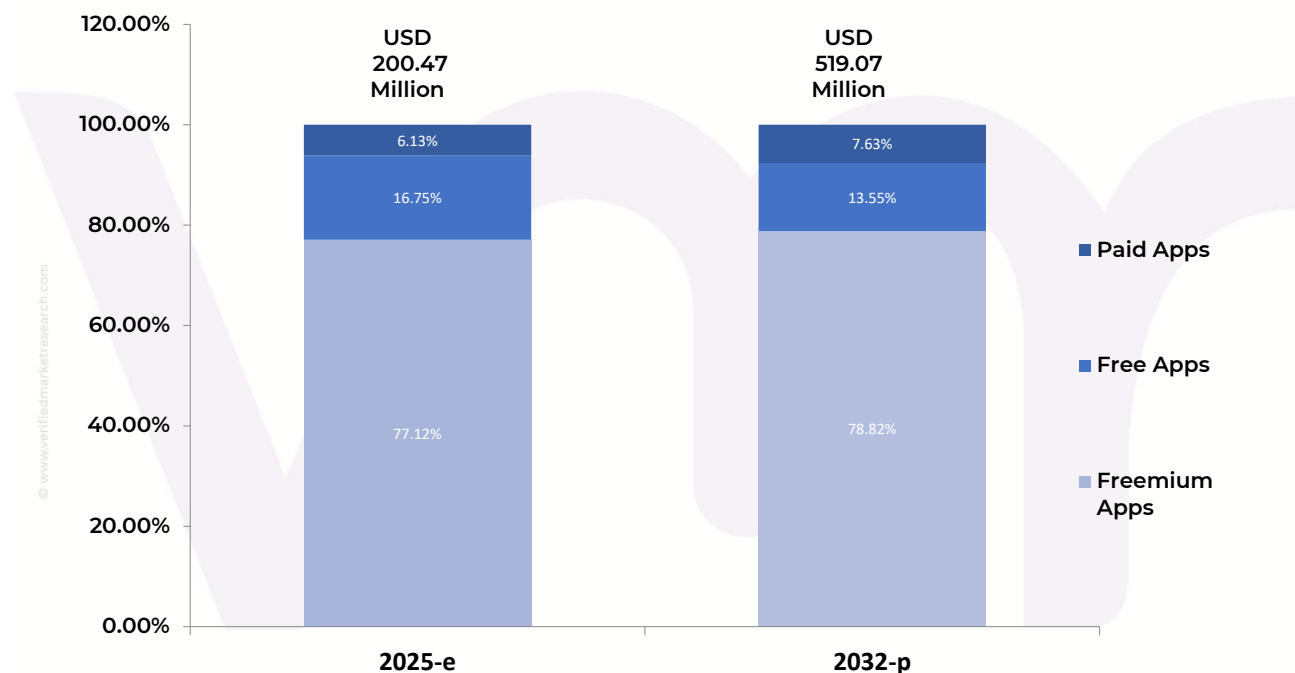
Source: Verified Market Research

On the basis of Type, the Global Plant Identification Apps Market has been segmented into:

- Freemium Apps
- Free Apps
- Paid Apps

## 5.2 GLOBAL PLANT IDENTIFICATION APPS MARKET: BASIS POINT SHARE (BPS) ANALYSIS, BY TYPE

**FIGURE 24** GLOBAL PLANT IDENTIFICATION APPS MARKET BASIS POINT SHARE (BPS) ANALYSIS, BY TYPE



Source: Verified Market Research, e-Estimated & p-Projected

Note: **Basis Point Share (BPS) Analysis** involves comparing the relative performance or percentage change between segment values. The term "basis point" signifies one hundredth of a percentage point, or 0.01%. This analysis is provided by determining the percentage point difference between 2032 and 2025. A positive BPS value signifies an increase, whereas a negative BPS value indicates a decrease.

**TABLE 2 GLOBAL PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	118.43	135.24	154.61	176.98	409.12	14.91%
Free Apps	27.52	30.38	33.58	37.17	70.33	11.14%
Paid Apps	8.59	10.30	12.29	14.61	39.62	18.21%
Total	154.54	175.92	200.47	228.77	519.07	14.56%

Freemium Apps accounted for the largest market share of 76.88% in 2024, with a market Value of USD 135.24 Million and is projected to grow at a CAGR of 14.91% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 30.38 Million in 2024; it is projected to grow at a CAGR of 11.14%. However, Paid Apps is projected to grow at the highest CAGR of 18.21%.

### 5.3 FREEMIUM APPS

Freemium plant identification apps have emerged as the dominant segment, offering users basic identification features at no cost while monetizing advanced functionalities through premium subscriptions or in-app purchases. This model has gained traction due to its ability to attract a large user base while maintaining a steady revenue stream from users willing to pay for enhanced features such as offline access, unlimited searches, and advanced plant care recommendations. The widespread adoption of freemium apps is driven by the increasing accessibility of smartphones and the integration of AI-driven recognition technologies, which enhance identification accuracy and user experience. According to the International Telecommunication Union (ITU), mobile internet penetration has reached over 66% globally, expanding the potential user base for freemium applications. The growing interest in botany, environmental awareness, and home gardening has also fueled demand, particularly among hobbyists and students seeking educational tools. Freemium models benefit from high engagement levels, as users are more likely to explore premium offerings after experiencing initial value, leading to higher conversion rates. With advancements in AI and cloud computing improving identification precision, freemium plant identification apps are expected to maintain strong market dominance, supported by subscription-based revenue models that ensure long-term financial sustainability.

### 5.4 FREE APPS

Free plant identification apps, supported primarily by advertising revenue, provide users with basic functionalities without requiring payment. These apps are particularly attractive



in emerging markets, where price sensitivity remains high, and ad-supported models allow for widespread adoption. The demand for free apps has been accelerated by increasing smartphone penetration and digital literacy, with many users seeking cost-effective tools for plant identification. According to data from the United Nations Educational, Scientific and Cultural Organization (UNESCO), digital education initiatives have expanded significantly, promoting the use of mobile applications as learning tools. While free apps offer accessibility advantages, their reliance on ads often affects user experience, leading to potential retention challenges. Many free apps also have limitations in database size, AI capabilities, and offline functionality, restricting their usability in areas with poor connectivity. However, their adoption remains strong among casual users, students, and researchers in regions where subscription-based services may not be viable. Developers of free apps continuously innovate through AI enhancements and community-driven databases to maintain relevance in a competitive market. As digital advertising spending continues to rise globally, free plant identification apps are expected to sustain their market presence, particularly in price-sensitive demographics.

## 5.5 PAID APPS

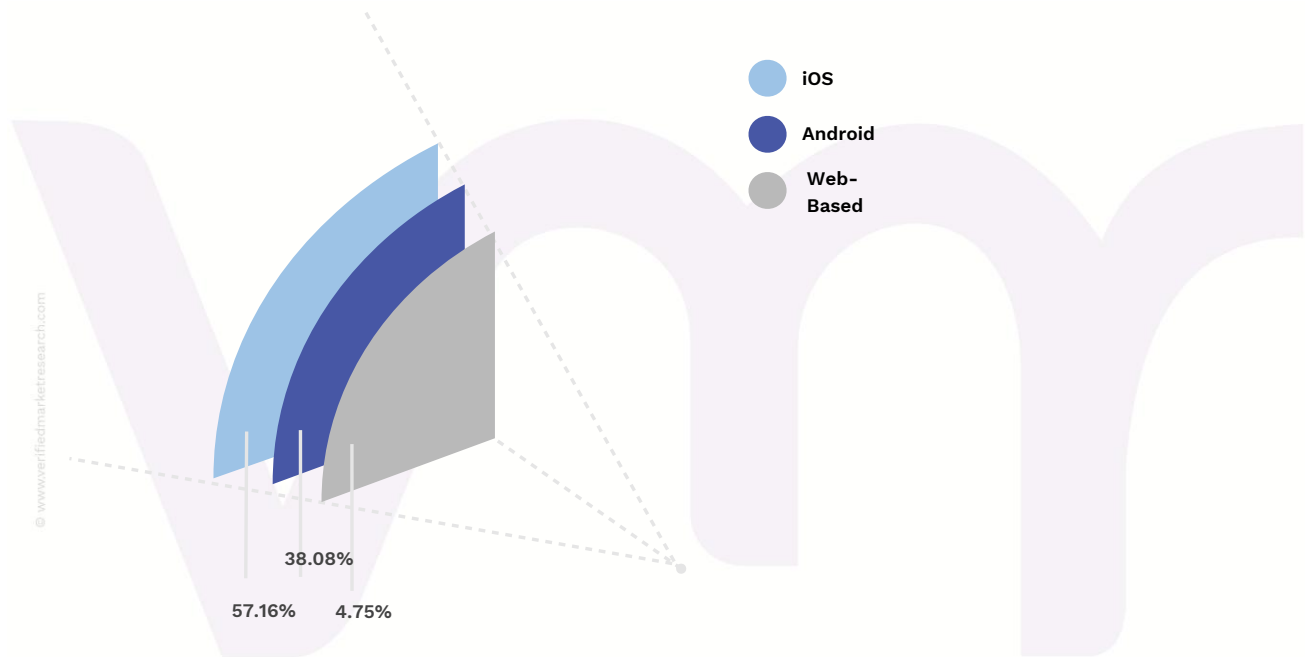
Paid plant identification apps operate on a one-time purchase model, offering users a premium experience without ads or subscription fees. This segment appeals to professionals, educators, and serious hobbyists who require reliable and detailed plant identification tools without recurring costs. The pricing of these apps typically ranges between \$4.99 and \$29.99, depending on features such as high-precision AI recognition, offline access, and integration with botanical research platforms. The adoption of paid apps is influenced by consumer willingness to invest in educational and environmental tools, supported by global trends in digital content purchasing. According to the International Data Corporation (IDC), digital content sales, including educational applications, have witnessed consistent growth, reflecting a shift in consumer behavior toward premium digital solutions. Paid apps also benefit from strong user loyalty, as the absence of ads enhances engagement and retention. However, market penetration for paid apps is generally lower compared to freemium and free models, as many users prefer to explore no-cost alternatives before committing to a purchase. Developers in this segment focus on delivering superior user experience, accuracy, and exclusive features to justify their pricing.



## 6 MARKET, BY PLATFORM

### 6.1 OVERVIEW

*FIGURE 25 GLOBAL PLANT IDENTIFICATION APPS MARKET, BY PLATFORM*



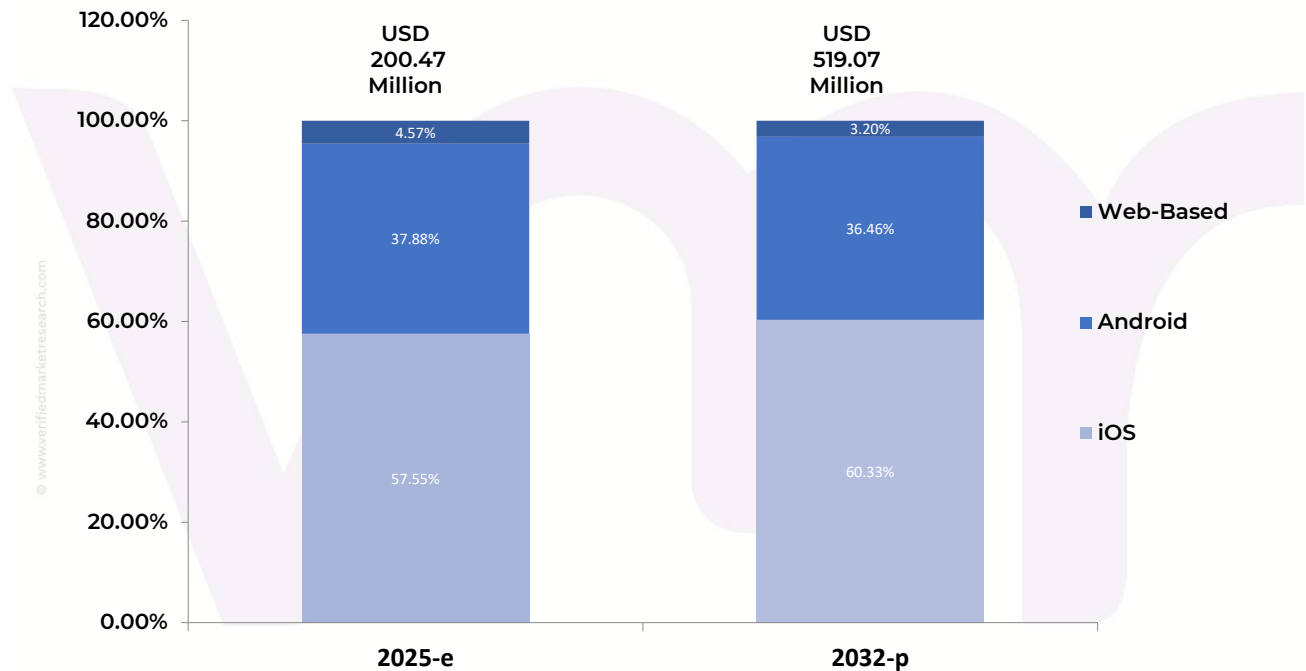
Source: Verified Market Research

On the basis of Platform, the Global Plant Identification Apps Market has been segmented into:

- iOS
- Android
- Web-Based

## 6.2 GLOBAL PLANT IDENTIFICATION APPS MARKET: BASIS POINT SHARE (BPS) ANALYSIS, BY PLATFORM

**FIGURE 26** GLOBAL PLANT IDENTIFICATION APPS MARKET BASIS POINT SHARE (BPS) ANALYSIS, BY PLATFORM



Source: Verified Market Research, e-Estimated & p-Projected

Note: **Basis Point Share (BPS) Analysis** involves comparing the relative performance or percentage change between segment values. The term "basis point" signifies one hundredth of a percentage point, or 0.01%. This analysis is provided by determining the percentage point difference between 2032 and 2025. A positive BPS value signifies an increase, whereas a negative BPS value indicates a decrease.

**TABLE 3 GLOBAL PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	87.74	100.56	115.37	132.55	313.18	15.33%
Android	59.18	67.00	75.93	86.18	189.27	13.94%
Web-Based	7.62	8.36	9.17	10.04	16.61	8.87%
Total	154.54	175.92	200.47	228.77	519.07	14.56%

iOS accounted for the largest market share of 57.16% in 2024, with a market Value of USD 100.56 Million and is projected to grow at the highest CAGR of 15.33% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 67.00 Million in 2024; it is projected to grow at a CAGR of 13.94%.

### 6.3 IOS

The iOS platform remains one of the most lucrative segments for plant identification apps, driven by Apple's strong market presence in high-income economies and its reputation for providing a seamless user experience. The platform's integration with advanced AI capabilities and machine learning frameworks, such as Core ML and ARKit, enhances the performance of plant identification applications, making them more precise and user-friendly. According to data from the International Telecommunication Union (ITU), smartphone penetration in high-income regions, where Apple dominates, exceeds 90%, ensuring a vast and engaged user base for iOS apps. Additionally, iOS users have historically exhibited higher spending habits on digital applications, with Apple's App Store generating nearly twice the revenue of the Google Play Store, according to the App Store Transparency Report. This willingness to pay for premium and subscription-based services has fueled the adoption of freemium and paid plant identification apps, ensuring sustainable revenue models for developers. Apple's ecosystem is also known for strong data privacy and security measures, further attracting professionals, educators, and conservationists who require reliable and secure plant identification tools. With continuous advancements in AI-powered image recognition and augmented reality (AR) integration, iOS-based plant identification apps are poised for sustained growth, catering to a premium market segment that values high-quality digital experiences.

### 6.4 ANDROID

Android dominates the global smartphone market, accounting for over 70% of mobile operating systems worldwide, as reported by the International Data Corporation (IDC). This extensive market share makes Android the most widely adopted platform for plant

identification apps, particularly in emerging markets where affordability and accessibility are key factors in smartphone adoption. Android's open-source nature enables developers to create cost-effective applications with broad compatibility across diverse devices, fostering innovation and rapid market penetration. The platform's extensive reach across varying economic demographics has driven strong adoption of free and freemium plant identification apps, particularly in price-sensitive regions where users prefer ad-supported models. According to data from the GSMA, mobile internet penetration in developing economies is rapidly expanding, further accelerating the adoption of Android-based plant identification applications. Additionally, Google's AI and cloud-based services, such as Google Lens and TensorFlow, provide developers with powerful tools to enhance plant recognition accuracy and functionality. The ability to support offline functionality is another critical driver of growth, particularly in rural areas with limited internet connectivity. As smartphone penetration continues to rise in Asia, Africa, and Latin America, Android-based plant identification apps are expected to witness robust adoption, fueled by increasing digital literacy and environmental awareness initiatives across these regions.

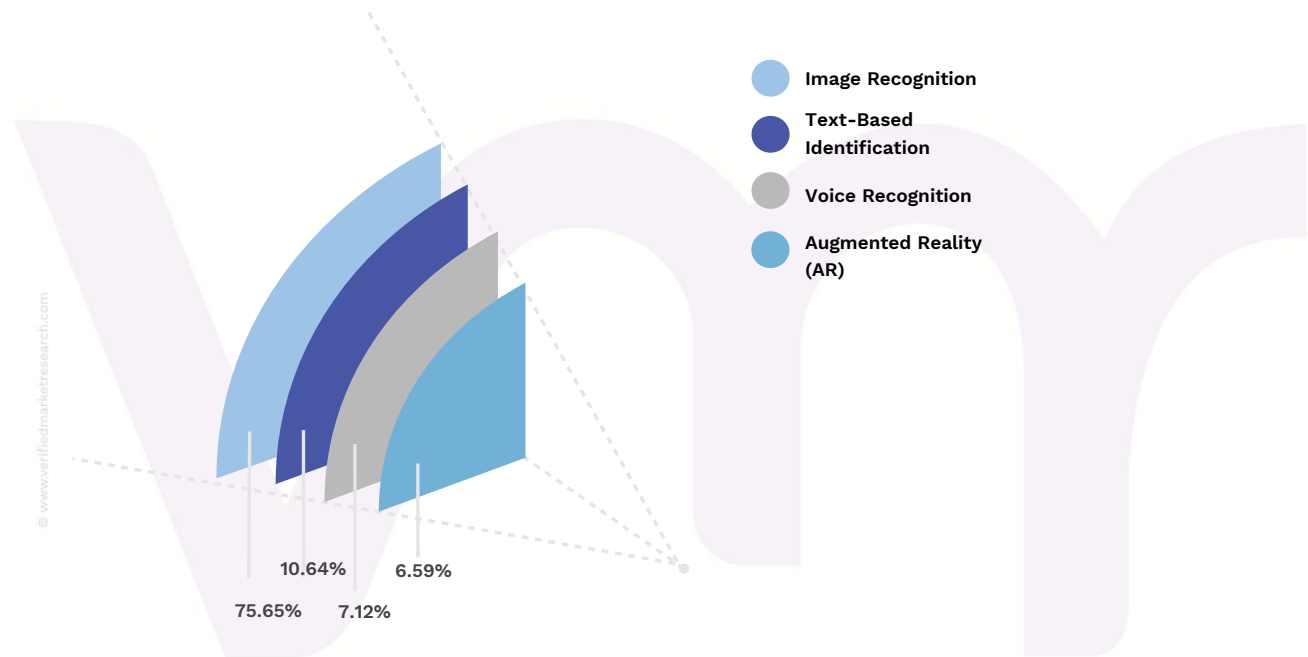
## 6.5 WEB-BASED

Web-based plant identification applications offer cross-platform accessibility, making them an essential segment within the market. These apps are typically designed for researchers, educators, and environmental organizations that require high-precision identification tools accessible from desktops and mobile browsers. The growing adoption of cloud computing and big data integration has significantly improved the functionality of web-based plant identification apps, allowing users to access extensive plant databases without the need for high-end mobile devices. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), digital education initiatives have increasingly incorporated online tools, promoting the use of web-based applications in academic and research settings. Additionally, advancements in browser-based AI recognition and cloud computing, supported by organizations like the International Telecommunication Union (ITU), have enabled real-time plant identification without requiring app downloads. This accessibility is particularly valuable for institutions and professionals who rely on large-scale environmental data for conservation and agricultural purposes. However, the primary limitation of web-based platforms remains their dependence on internet connectivity, which restricts usability in remote and rural areas with limited digital infrastructure.

## 7 MARKET, BY FUNCTIONALITY

### 7.1 OVERVIEW

*FIGURE 27 GLOBAL PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY*



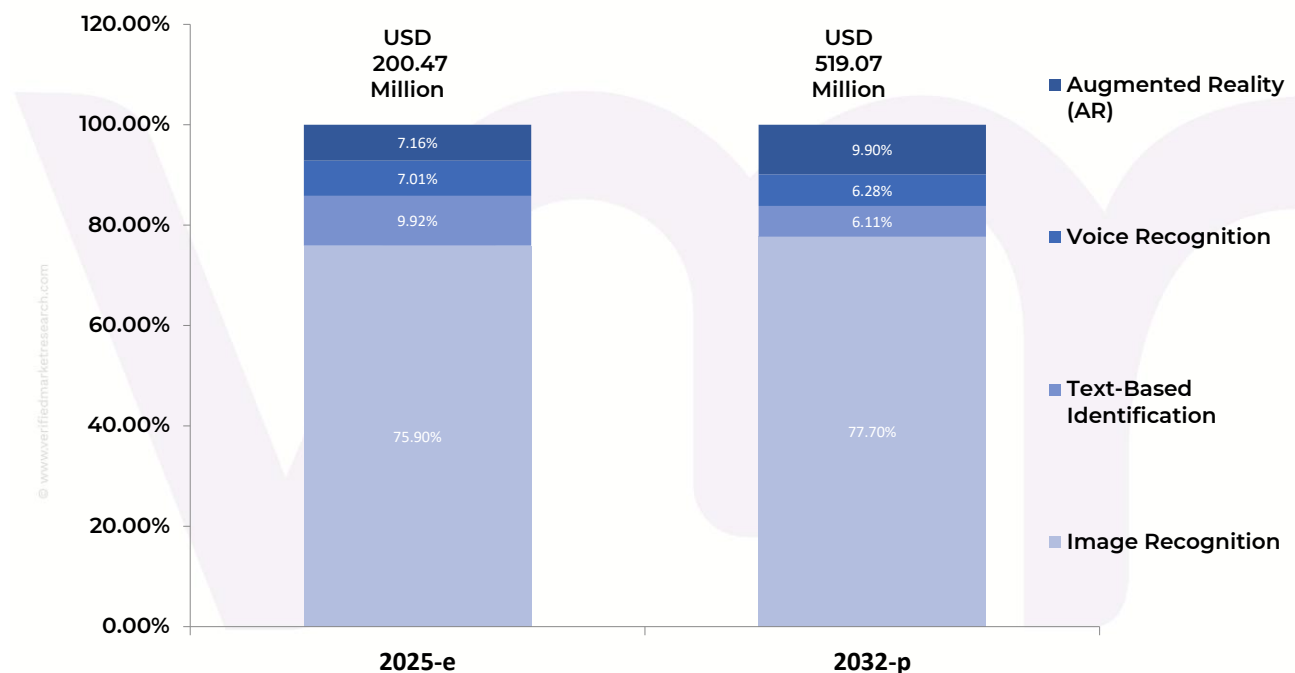
Source: Verified Market Research

On the basis of Functionality, the Global Plant Identification Apps Market has been segmented into:

- Image Recognition
- Text-Based Identification
- Voice Recognition
- Augmented Reality (AR)

## 7.2 GLOBAL PLANT IDENTIFICATION APPS MARKET: BASIS POINT SHARE (BPS) ANALYSIS, BY FUNCTIONALITY

**FIGURE 28** GLOBAL PLANT IDENTIFICATION APPS MARKET BASIS POINT SHARE (BPS) ANALYSIS, BY FUNCTIONALITY



Source: Verified Market Research, e-Estimated & p-Projected

**Note: Basis Point Share (BPS) Analysis** involves comparing the relative performance or percentage change between segment values. The term "basis point" signifies one hundredth of a percentage point, or 0.01%. This analysis is provided by determining the percentage point difference between 2032 and 2025. A positive BPS value signifies an increase, whereas a negative BPS value indicates a decrease.

**TABLE 4 GLOBAL PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	116.52	133.08	152.17	174.22	403.32	14.94%
Text-Based Identification	17.62	18.71	19.90	21.18	31.74	6.90%
Voice Recognition	11.18	12.53	14.05	15.79	32.62	12.78%
Augmented Reality (AR)	9.23	11.60	14.36	17.57	51.39	19.98%
Total	154.54	175.92	200.47	228.77	519.07	14.56%

Image Recognition accounted for the largest market share of 75.65% in 2024, with a market Value of USD 133.08 Million and is projected to grow at a CAGR of 14.94% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD 18.71 Million in 2024; it is projected to grow at a CAGR of 6.90%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 19.98%.

### 7.3 IMAGE RECOGNITION

Image recognition is the dominant functionality in plant identification apps, leveraging artificial intelligence (AI) and machine learning (ML) to analyze plant images and match them with extensive botanical databases. The rapid advancements in AI-driven image processing, particularly convolutional neural networks (CNNs), have significantly improved recognition accuracy, making this technology more reliable and accessible. According to the International Telecommunication Union (ITU), over 90% of smartphone users globally have access to cameras with AI-powered features, driving the widespread adoption of image-based plant identification. Additionally, organizations such as the United Nations Environment Programme (UNEP) emphasize the role of AI in biodiversity conservation, further encouraging the use of image recognition tools for environmental awareness and species tracking. The ability to instantly identify plants in real-time, even in offline modes, has made image recognition the preferred choice among casual users, researchers, and conservationists. With the integration of cloud-based databases and improved AI algorithms, image recognition in plant identification apps is expected to see continuous innovation, enhancing user engagement and market penetration.

### 7.4 TEXT-BASED IDENTIFICATION

Text-based identification allows users to input plant names, characteristics, or descriptions to retrieve relevant botanical information. While this functionality is less reliant on AI-driven automation, it serves an essential role for professionals, educators, and researchers who require precise taxonomic details. The Food and Agriculture

Organization (FAO) has reported an increasing demand for digital agricultural knowledge tools, particularly in rural areas where image-based recognition might be limited due to lower smartphone camera quality. Text-based identification is also crucial for integrating plant identification apps with existing botanical databases, government research initiatives, and academic resources. Moreover, it allows users to explore historical and medicinal plant uses, supporting the conservation efforts of traditional knowledge. Although this segment may not grow as rapidly as image recognition, its value lies in complementing AI-powered functionalities by offering a more research-oriented approach to plant identification, particularly in professional and academic settings.

## 7.5 VOICE RECOGNITION

Voice recognition is an emerging functionality in plant identification apps, allowing users to verbally describe plant characteristics or scientific names to retrieve relevant results. With the rising adoption of voice assistants such as Google Assistant, Apple's Siri, and Amazon Alexa, speech-based search capabilities have gained traction. According to the International Data Corporation (IDC), global smart speaker shipments exceeded 200 million units in 2023, reflecting a growing consumer preference for voice-driven interactions. This trend has driven the integration of voice recognition into plant identification apps, particularly for users who prefer hands-free access or have difficulty typing complex botanical names. Additionally, the United Nations Educational, Scientific and Cultural Organization (UNESCO) emphasizes the importance of multilingual accessibility in digital platforms, making voice-enabled search a crucial component for non-English-speaking users. Despite being in its nascent stage, voice recognition is expected to expand as AI-driven natural language processing (NLP) capabilities improve, further enhancing user experience and making plant identification more intuitive.

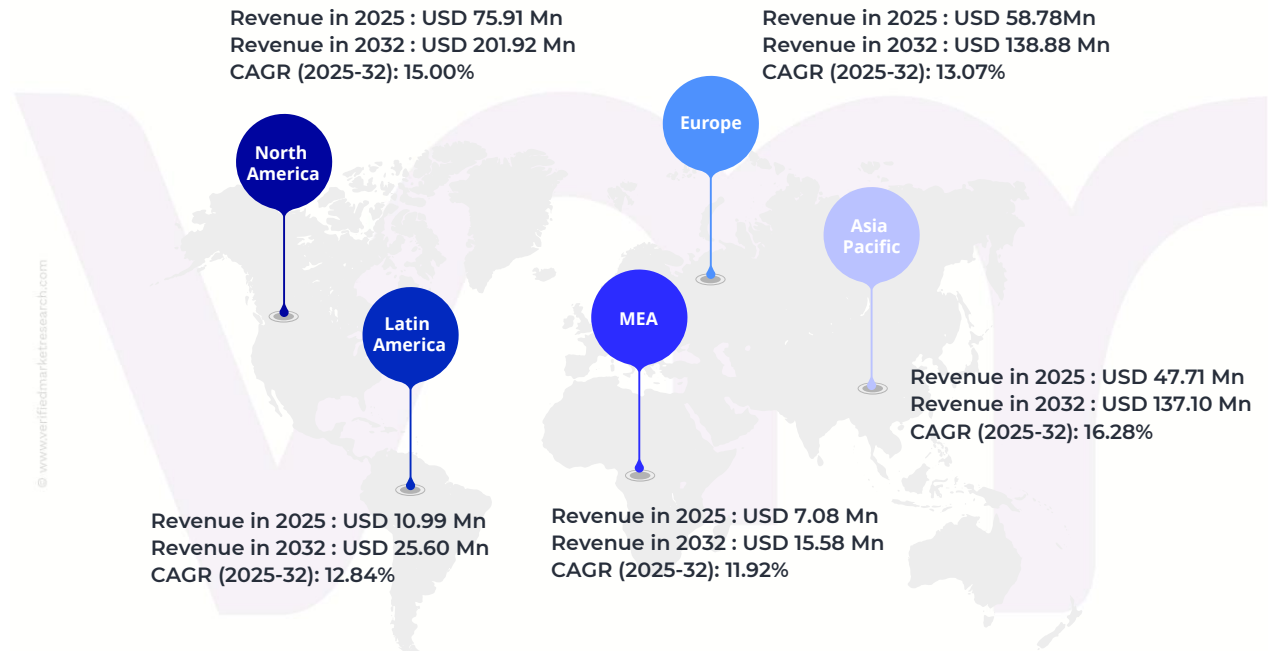
## 7.6 AUGMENTED REALITY (AR)

Augmented reality (AR) is revolutionizing plant identification by overlaying digital information onto real-world plant images, providing interactive and immersive experiences. With AR technology, users can receive real-time insights about plant species, growth conditions, and ecological significance simply by pointing their smartphone cameras at a plant. The World Economic Forum (WEF) highlights AR as a key driver of digital transformation, with increasing investments in immersive learning and interactive mobile applications. Additionally, Apple's ARKit and Google's ARCore have expanded the possibilities for AR-based plant identification, making it a growing segment in the market. This functionality is particularly beneficial for educational institutions, botanical gardens, and eco-tourism industries that seek to engage users with interactive learning experiences.



## 8 MARKET, BY GEOGRAPHY

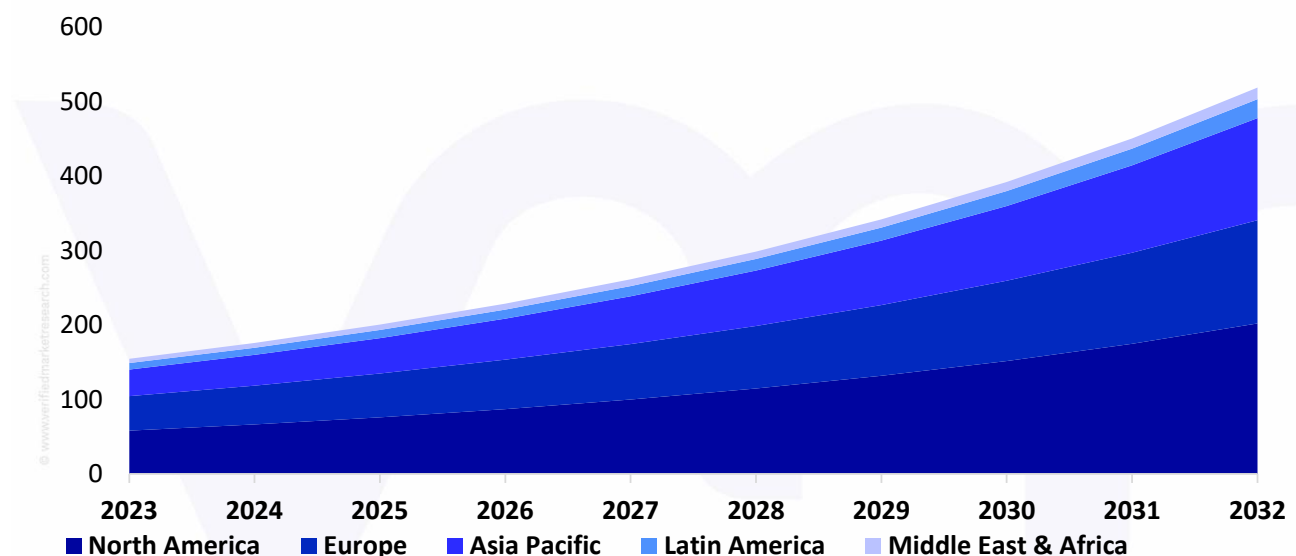
### 8.1 OVERVIEW



The Global Plant Identification Apps Market is segmented on the basis of geography into:

- North America
- Europe
- Asia Pacific
- Latin America
- Middle East and Africa

**FIGURE 29 GLOBAL PLANT IDENTIFICATION APPS MARKET, BY GEOGRAPHY, 2023-2032 (USD MILLION)**



Source: Verified Market Research

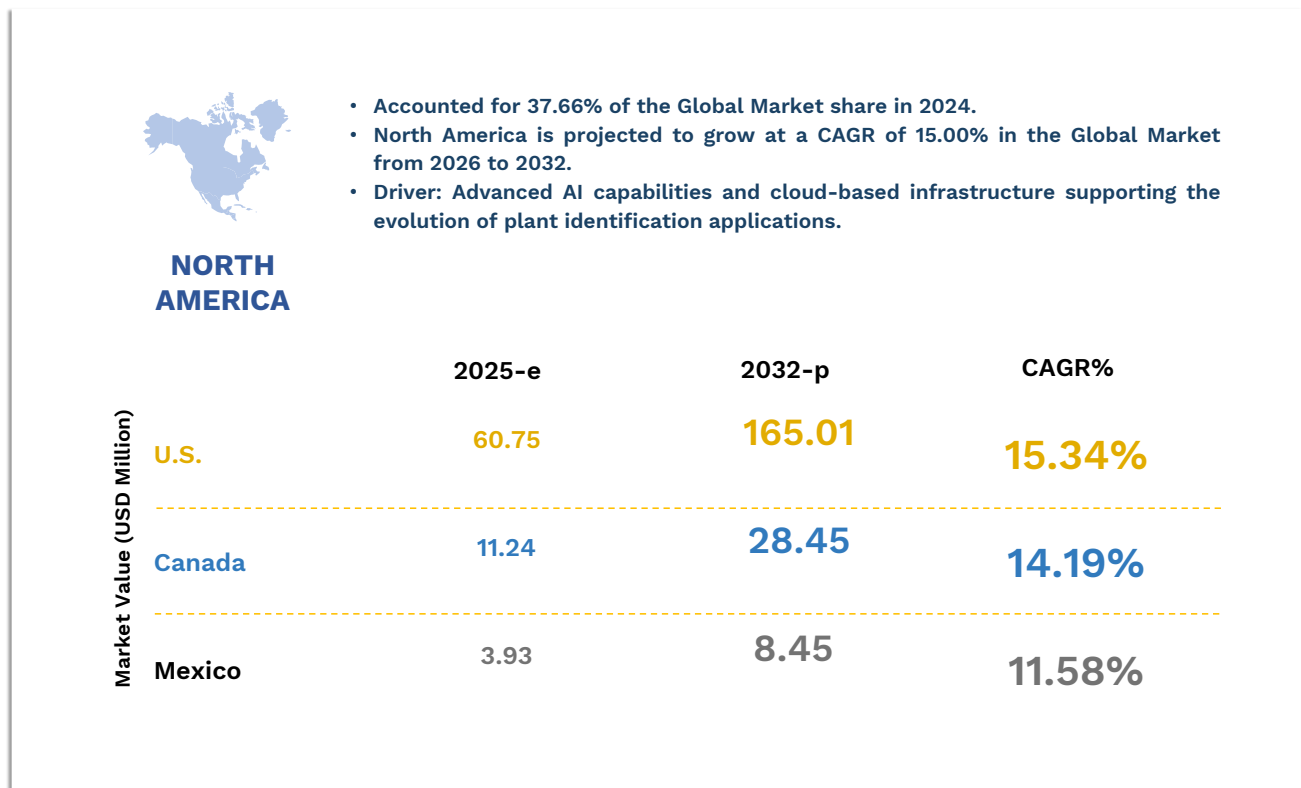
As seen in the above figure, North America accounted for the largest market share of 37.66% in 2024, with a market Value of USD 66.26 Million and is projected to grow at a CAGR of 15.00% during the forecast period. Europe was the second-largest market in 2024, Value of USD 52.26 Million in 2024; it is projected to grow at a CAGR of 13.07%. However, Asia Pacific is projected to grow at the highest CAGR of 16.28%.

**TABLE 5 GLOBAL PLANT IDENTIFICATION APPS MARKET, BY GEOGRAPHY, 2023-2032 (USD MILLION)**

Region	2023	2024	2025	2026	2032	CAGR (2025-2032)
North America	57.88	66.26	75.91	87.05	201.92	15.00%
Europe	46.52	52.26	58.78	66.21	138.88	13.07%
Asia Pacific	35.70	41.25	47.71	55.26	137.10	16.28%
Latin America	8.73	9.79	10.99	12.35	25.60	12.84%
Middle East & Africa	5.72	6.36	7.08	7.89	15.58	11.92%
Total	154.54	175.92	200.47	228.77	519.07	14.56%

## 8.2 NORTH AMERICA

**FIGURE 30 NORTH AMERICA MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

North America remains a dominant market for plant identification apps, driven by high smartphone penetration, strong environmental awareness, and government-led conservation initiatives. According to the Federal Communications Commission (FCC), as of 2024, the United States has over 310 million smartphone users, representing approximately 92% of the population. This extensive smartphone adoption provides a strong foundation for mobile-based applications, including plant identification tools. Similarly, Canada's smartphone penetration stands at 90%, according to Statistics Canada, ensuring widespread accessibility to digital platforms. Mexico, while slightly behind, has experienced rapid digital adoption, with the Federal Telecommunications Institute (IFT) reporting over 85 million smartphone users, accounting for nearly 65% of the population. This increasing mobile adoption across North America facilitates the seamless integration of plant identification apps into everyday use, particularly for education, research, and outdoor activities.

Environmental consciousness is another major factor driving the adoption of plant identification apps in the region. The U.S. Environmental Protection Agency (EPA) has

reported a significant rise in citizen science initiatives, with over 1,200 community-led biodiversity monitoring programs actively engaging the public in conservation efforts. The National Park Service (NPS) has also expanded its digital resources, allowing visitors to access real-time plant databases through mobile applications while exploring national parks. In Canada, the Parks Canada Agency has launched initiatives promoting biodiversity awareness, including digital tools to assist in plant species identification. These governmental efforts align with the growing popularity of plant identification apps, as users increasingly seek digital solutions to engage with and protect their natural environments. In Mexico, the National Commission for the Knowledge and Use of Biodiversity (CONABIO) has developed interactive programs encouraging citizen participation in plant and ecosystem monitoring, further boosting the market potential for plant identification applications.

The education sector has also played a pivotal role in market growth. The U.S. Department of Education has reported an increase in the integration of digital learning tools in K-12 and higher education, with over 80% of educational institutions now incorporating mobile applications into their science curriculums. Universities and research institutions across North America, including the University of California and the Smithsonian Institution, have adopted AI-powered plant identification platforms for botanical research and conservation studies. Canada's Ministry of Education has also emphasized digital literacy in environmental education, supporting the adoption of plant identification apps in academic settings. In Mexico, the Secretariat of Public Education (SEP) has introduced initiatives promoting mobile learning in rural areas, providing students with access to plant databases and identification tools. This widespread academic adoption not only increases awareness but also fosters long-term engagement with plant identification applications, ensuring sustainable market growth.

Technological advancements in AI and image recognition have further strengthened the North American market. The U.S. National Institute of Standards and Technology (NIST) has highlighted significant progress in AI-driven image recognition accuracy, with machine learning algorithms achieving over 95% accuracy in plant species identification. These advancements have enhanced user experience and reliability, making plant identification apps more appealing to a broad audience. The Canadian Institute for Advanced Research (CIFAR) has also reported substantial investment in AI research, with funding exceeding \$3 billion in the past five years to improve machine learning applications, including botanical identification tools. Mexico's National Council for Science and Technology (CONACYT) has also invested in AI-driven research projects, further boosting the technological landscape for plant identification applications.

**TABLE 6 NORTH AMERICA PLANT IDENTIFICATION APPS MARKET, BY COUNTRY, 2023-2032 (USD MILLION)**

Country	2023	2024	2025	2026	2032	CAGR (2025-2032)
U.S.	46.04	52.87	60.75	69.88	165.01	15.34%
Canada	8.69	9.88	11.24	12.79	28.45	14.19%
Mexico	3.15	3.52	3.93	4.38	8.45	11.58%
Total	57.88	66.26	75.91	87.05	201.92	15.00%

U.S. accounted for the largest market share of 79.79% in 2024, with a market Value of USD 52.87 Million and is projected to grow at the highest CAGR of 15.34% during the forecast period. Canada accounted for the second-largest market in 2024, Value of USD 9.88 Million in 2024; it is projected to grow at a CAGR of 14.19%.

**TABLE 7 NORTH AMERICA PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	46.05	52.89	60.80	69.95	165.44	15.37%
Free Apps	9.03	10.01	11.11	12.35	23.69	11.41%
Paid Apps	2.80	3.35	4.00	4.76	12.79	18.07%
Total	57.88	66.26	75.91	87.05	201.92	15.00%

Freemium Apps accounted for the largest market share of 79.83% in 2024, with a market Value of USD 52.89 Million and is projected to grow at a CAGR of 15.37% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 10.01 Million in 2024; it is projected to grow at a CAGR of 11.41%. However, Paid Apps is projected to grow at the highest CAGR of 18.07%.

**TABLE 8 NORTH AMERICA PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	33.81	38.97	44.94	51.87	125.16	15.76%
Android	21.26	24.21	27.60	31.48	70.79	14.41%
Web-Based	2.80	3.08	3.38	3.70	5.96	8.46%
Total	57.88	66.26	75.91	87.05	201.92	15.00%

iOS accounted for the largest market share of 58.81% in 2024, with a market Value of USD 38.97 Million and is projected to grow at the highest CAGR of 15.76% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 24.21 Million in 2024; it is projected to grow at a CAGR of 14.41%.

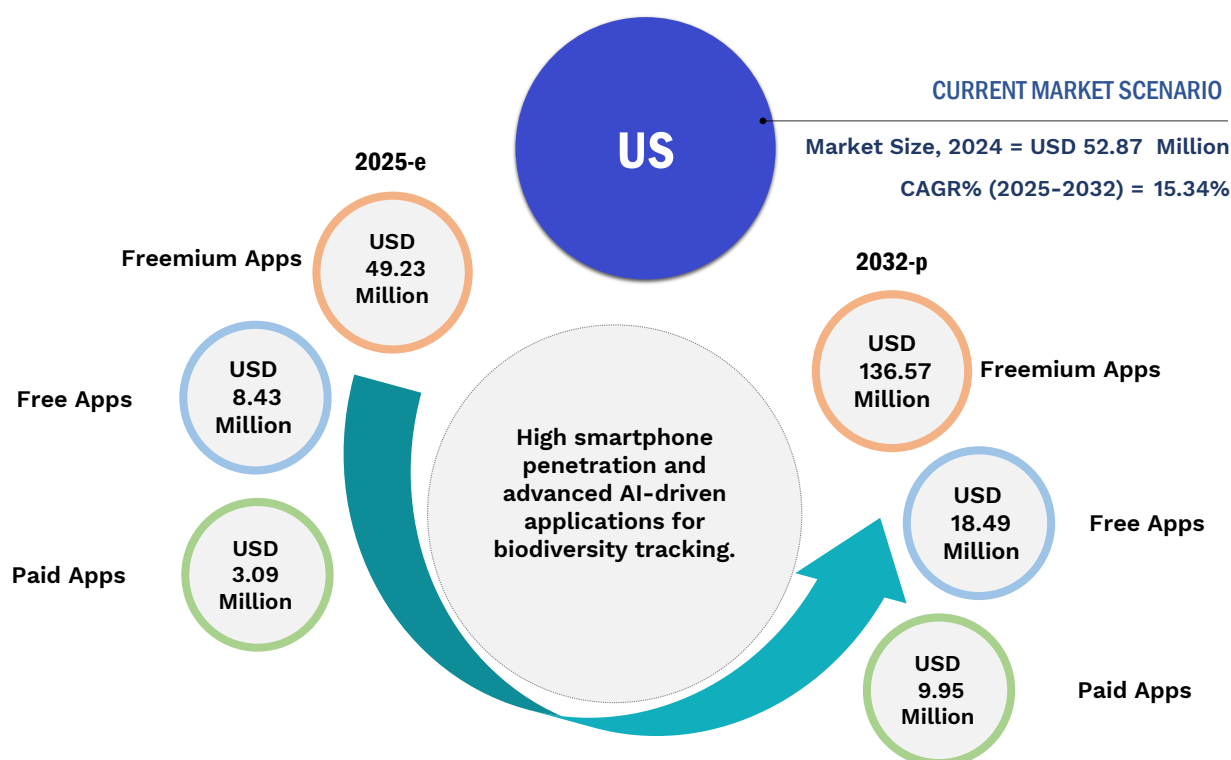
**TABLE 9 NORTH AMERICA PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	43.68	50.16	57.65	66.31	156.67	15.35%
Text-Based Identification	6.50	6.91	7.36	7.85	11.75	6.91%
Voice Recognition	4.23	4.76	5.38	6.07	12.87	13.27%
Augmented Reality (AR)	3.47	4.42	5.52	6.82	20.62	20.70%
Total	57.88	66.26	75.91	87.05	201.92	15.00%

Image Recognition accounted for the largest market share of 75.71% in 2024, with a market Value of USD 50.16 Million and is projected to grow at a CAGR of 15.35% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD 6.91 Million in 2024; it is projected to grow at a CAGR of 6.91%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 20.70%.

## 8.2.1 U.S.

**FIGURE 31 U.S. MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 10 U.S. PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	37.09	42.72	49.23	56.80	136.57	15.69%
Free Apps	6.79	7.56	8.43	9.40	18.49	11.88%
Paid Apps	2.16	2.59	3.09	3.68	9.95	18.19%
Total	46.04	52.87	60.75	69.88	165.01	15.34%

Freemium Apps accounted for the largest market share of 80.80% in 2024, with a market Value of USD 42.72 Million and is projected to grow at a CAGR of 15.69% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 7.56 Million in 2024; it is projected to grow at a CAGR of 11.88%. However, Paid Apps is projected to grow at the highest CAGR of 18.19%.

**TABLE 11 U.S. PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	27.04	31.26	36.15	41.85	102.75	16.09%
Android	16.77	19.16	21.90	25.07	57.45	14.77%
Web-Based	2.23	2.45	2.70	2.96	4.82	8.65%
Total	46.04	52.87	60.75	69.88	165.01	15.34%

iOS accounted for the largest market share of 59.12% in 2024, with a market Value of USD 31.26 Million and is projected to grow at the highest CAGR of 16.09% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 19.16 Million in 2024; it is projected to grow at a CAGR of 14.77%.

**TABLE 12 U.S. PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

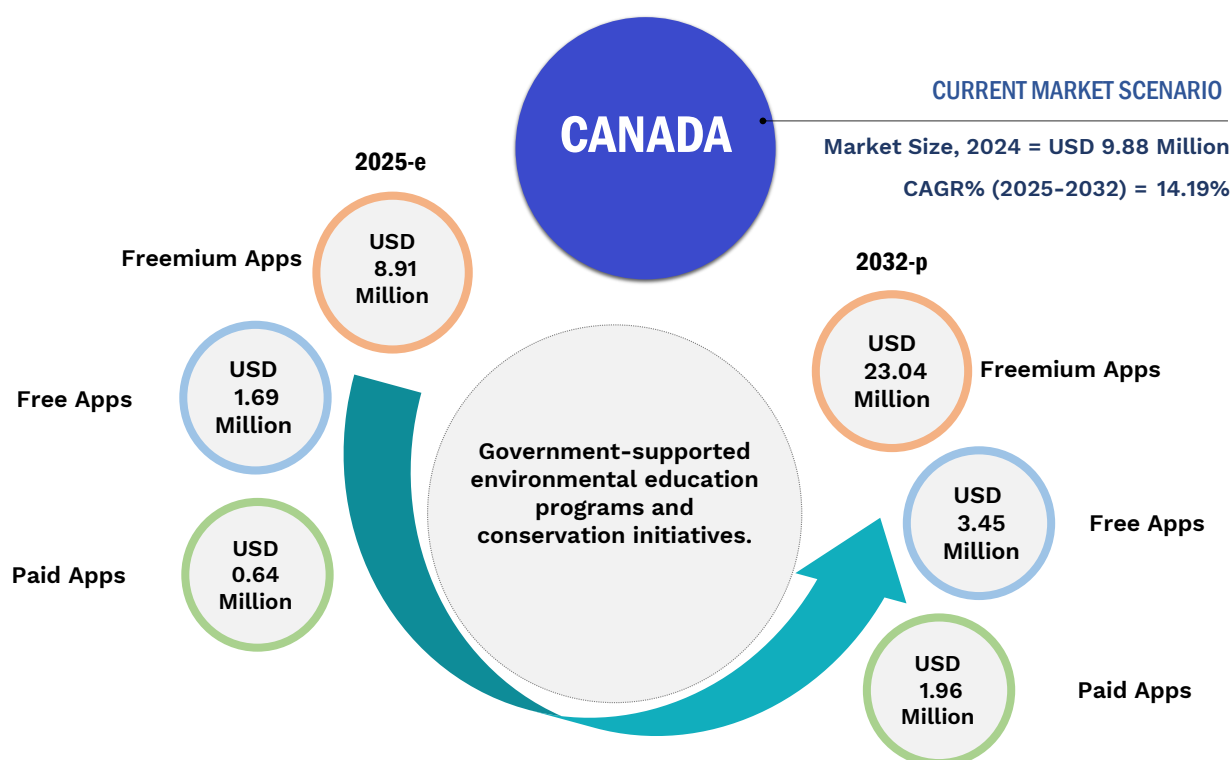
Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	34.94	40.24	46.38	53.51	128.65	15.69%
Text-Based Identification	5.03	5.37	5.74	6.14	9.38	7.27%
Voice Recognition	3.37	3.82	4.32	4.89	10.56	13.61%
Augmented Reality (AR)	2.70	3.44	4.31	5.34	16.43	21.06%
Total	46.04	52.87	60.75	69.88	165.01	15.34%

Image Recognition accounted for the largest market share of 76.12% in 2024, with a market Value of USD 40.24 Million and is projected to grow at a CAGR of 15.69% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD 5.37 Million in 2024; it is projected to grow at a CAGR of 7.27%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 21.06%.



## 8.2.2 CANADA

**FIGURE 32 CANADA MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 13 CANADA PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	6.85	7.81	8.91	10.18	23.04	14.54%
Free Apps	1.38	1.53	1.69	1.86	3.45	10.77%
Paid Apps	0.45	0.54	0.64	0.76	1.96	17.35%
Total	8.69	9.88	11.24	12.79	28.45	14.19%

Freemium Apps accounted for the largest market share of 79.07% in 2024, with a market Value of USD 7.81 Million and is projected to grow at a CAGR of 14.54% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 1.53 Million in 2024; it is projected to grow at a CAGR of 10.77%. However, Paid Apps is projected to grow at the highest CAGR of 17.35%.

**TABLE 14 CANADA PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032  
(USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	5.03	5.76	6.59	7.55	17.47	14.94%
Android	3.23	3.65	4.13	4.68	10.11	13.62%
Web-Based	0.43	0.47	0.51	0.56	0.88	8.08%
Total	8.69	9.88	11.24	12.79	28.45	14.19%

iOS accounted for the largest market share of 58.29% in 2024, with a market Value of USD 5.76 Million and is projected to grow at the highest CAGR of 14.94% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 3.65 Million in 2024; it is projected to grow at a CAGR of 13.62%.

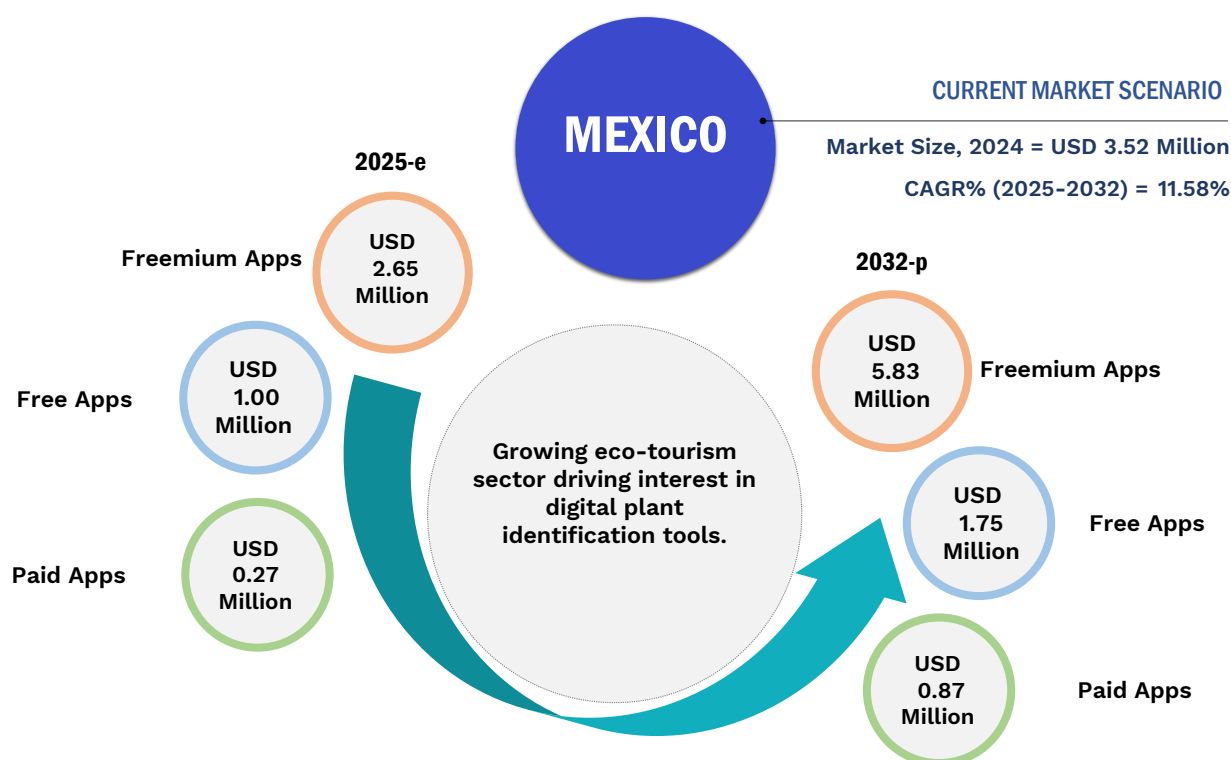
**TABLE 15 CANADA PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	6.46	7.36	8.40	9.59	21.72	14.54%
Text-Based Identification	1.06	1.12	1.18	1.25	1.80	6.20%
Voice Recognition	0.61	0.68	0.77	0.86	1.75	12.48%
Augmented Reality (AR)	0.56	0.71	0.88	1.09	3.18	20.05%
Total	8.69	9.88	11.24	12.79	28.45	14.19%

Image Recognition accounted for the largest market share of 74.54% in 2024, with a market Value of USD 7.36 Million and is projected to grow at a CAGR of 14.54% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD 1.12 Million in 2024; it is projected to grow at a CAGR of 6.20%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 20.05%.

## 8.2.3 MEXICO

**FIGURE 33 MEXICO MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 16 MEXICO PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	2.11	2.37	2.65	2.97	5.83	11.91%
Free Apps	0.86	0.93	1.00	1.09	1.75	8.23%
Paid Apps	0.18	0.22	0.27	0.33	0.87	18.31%
Total	3.15	3.52	3.93	4.38	8.45	11.58%

Freemium Apps accounted for the largest market share of 67.35% in 2024, with a market Value of USD 2.37 Million and is projected to grow at a CAGR of 11.91% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD .93 Million in 2024; it is projected to grow at a CAGR of 8.23%. However, Paid Apps is projected to grow at the highest CAGR of 18.31%.

**TABLE 17 MEXICO PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032  
(USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	1.74	1.95	2.20	2.47	4.95	12.30%
Android	1.26	1.40	1.56	1.73	3.24	11.02%
Web-Based	0.15	0.16	0.17	0.18	0.26	6.39%
Total	3.15	3.52	3.93	4.38	8.45	11.58%

iOS accounted for the largest market share of 55.59% in 2024, with a market Value of USD 1.95 Million and is projected to grow at the highest CAGR of 12.30% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 1.40 Million in 2024; it is projected to grow at a CAGR of 11.02%.

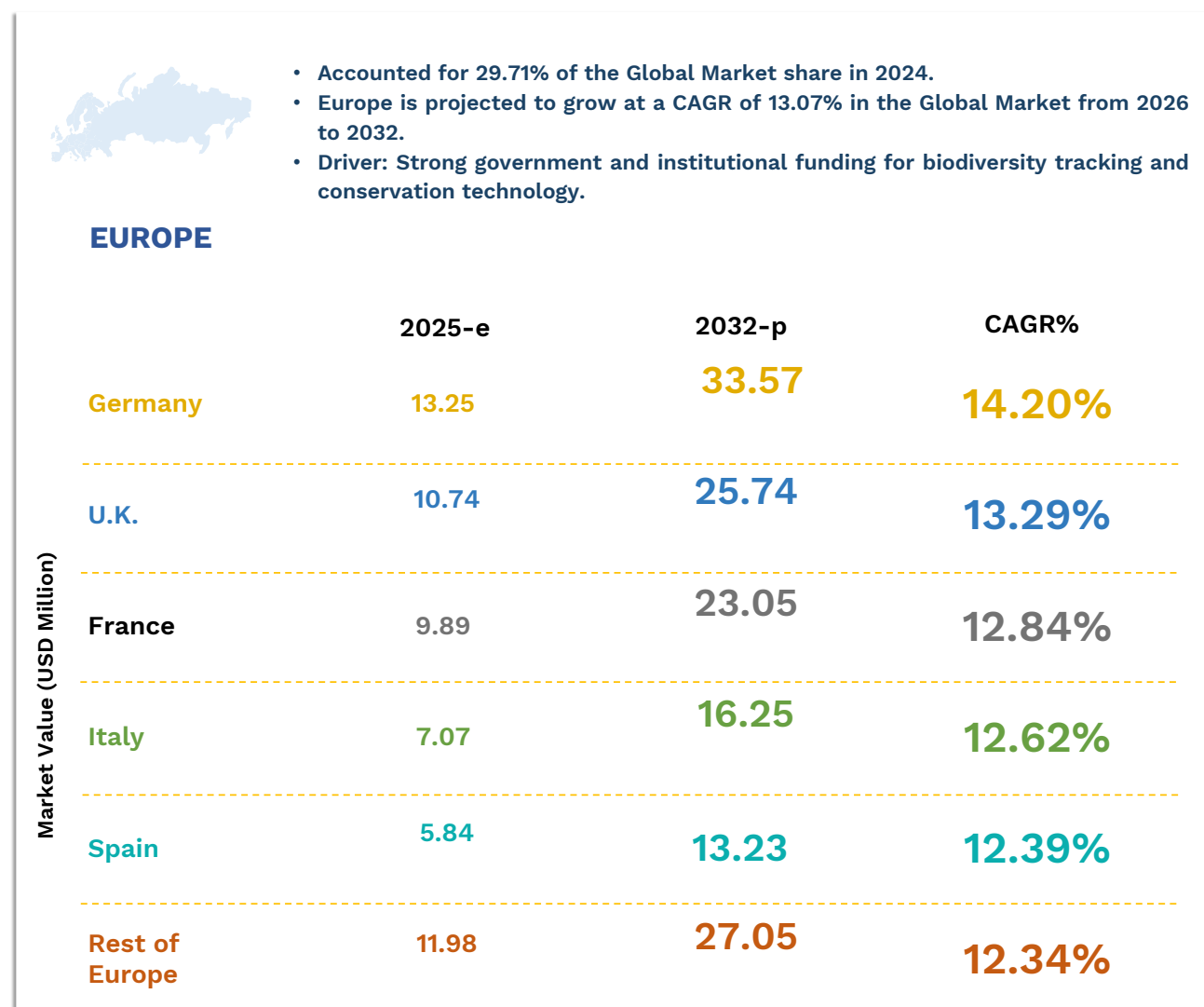
**TABLE 18 MEXICO PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	2.28	2.56	2.87	3.21	6.30	11.91%
Text-Based Identification	0.41	0.43	0.44	0.46	0.57	3.77%
Voice Recognition	0.24	0.26	0.29	0.32	0.56	9.90%
Augmented Reality (AR)	0.21	0.27	0.33	0.40	1.02	17.54%
Total	3.15	3.52	3.93	4.38	8.45	11.58%

Image Recognition accounted for the largest market share of 72.79% in 2024, with a market Value of USD 2.56 Million and is projected to grow at a CAGR of 11.91% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .43 Million in 2024; it is projected to grow at a CAGR of 3.77%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 17.54%.

## 8.3 EUROPE

**FIGURE 34 EUROPE MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

Europe represents a significant market for plant identification apps, driven by high smartphone penetration, strong government support for biodiversity conservation, and a well-established environmental consciousness among its population. According to the European Commission's Digital Economy and Society Index (DESI), over 87% of Europeans use smartphones, with penetration rates exceeding 90% in Germany, the United Kingdom, France, and the Netherlands. The widespread availability of high-speed mobile internet further enhances the accessibility and usability of plant identification applications. The United Kingdom's Office for National Statistics (ONS) reports that 98% of households have internet access, ensuring seamless connectivity for cloud-based plant recognition tools.

Similarly, Germany's Federal Statistical Office (Destatis) notes that mobile internet penetration in the country surpasses 94%, supporting the adoption of digital applications in both urban and rural areas. France and Italy also exhibit strong digital adoption, with over 85% of residents actively using mobile-based services, as reported by the French National Institute of Statistics and Economic Studies (INSEE) and Italy's National Institute of Statistics (ISTAT).

Environmental awareness and conservation efforts play a crucial role in the market's expansion. The European Environment Agency (EEA) has highlighted that the European Union (EU) allocates over \$14 billion annually for biodiversity and conservation initiatives. The EU Biodiversity Strategy for 2030 aims to restore 30% of degraded ecosystems, a policy that encourages citizen engagement through technology-driven solutions such as plant identification apps. Germany's Federal Ministry for the Environment has launched national biodiversity monitoring programs, integrating mobile applications to enable citizens to contribute to plant species tracking. Similarly, the United Kingdom's Department for Environment, Food & Rural Affairs (DEFRA) has promoted digital conservation tools, including mobile applications, to support nature restoration projects. France's Ministry of Ecological Transition has invested in interactive biodiversity databases accessible through mobile platforms, further supporting the adoption of plant identification applications. In Italy and Spain, national parks and conservation agencies have implemented digital tools for plant monitoring, aligning with the growing popularity of these apps among nature enthusiasts and researchers.

The education sector also contributes significantly to the adoption of plant identification applications. According to Eurostat, 75% of European schools integrate digital learning tools into their curricula, with a focus on STEM (Science, Technology, Engineering, and Mathematics) education. The European Commission's Erasmus+ program has funded several initiatives to enhance digital environmental education, including projects that encourage the use of mobile plant identification applications for botanical studies. Universities in Germany, France, and the United Kingdom have incorporated AI-powered plant identification tools into their research and academic programs, fostering greater adoption among students and researchers. The growing emphasis on digital literacy and interactive learning supports long-term engagement with plant identification apps, particularly among younger demographics.

Artificial intelligence (AI) and image recognition advancements further strengthen the European market. The European AI Alliance, an initiative by the European Commission, has invested over \$5 billion in AI research, including applications in environmental monitoring

and biodiversity conservation. The UK's Alan Turing Institute has developed machine learning models with over 97% accuracy in plant species identification, enhancing the reliability of digital plant recognition tools. Germany's Fraunhofer Institute has pioneered AI-driven environmental analytics, integrating high-resolution plant identification capabilities into mobile applications. France's National Institute for Research in Digital Science and Technology (INRIA) has also contributed to AI-powered plant recognition technologies, reinforcing the technical foundation for plant identification applications across Europe.

**TABLE 19 EUROPE PLANT IDENTIFICATION APPS MARKET, BY COUNTRY, 2023-2032 (USD MILLION)**

Country	2023	2024	2025	2026	2032	CAGR (2025-2032)
Germany	10.28	11.67	13.25	15.08	33.57	14.20%
UK	8.47	9.53	10.74	12.12	25.74	13.29%
France	7.86	8.81	9.89	11.12	23.05	12.84%
Italy	5.64	6.31	7.07	7.94	16.25	12.62%
Spain	4.68	5.22	5.84	6.54	13.23	12.39%
Rest of Europe	9.59	10.71	11.98	13.42	27.05	12.34%
Total	46.52	52.26	58.78	66.21	138.88	13.07%

Germany accounted for the largest market share of 22.32% in 2024, with a market Value of USD 11.67 Million and is projected to grow at the highest CAGR of 14.20% during the forecast period. UK accounted for the second-largest market in 2024, Value of USD 9.53 Million in 2024; it is projected to grow at a CAGR of 13.29%.

**TABLE 20 EUROPE PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	36.04	40.61	45.82	51.76	110.59	13.41%
Free Apps	7.17	7.82	8.53	9.32	16.27	9.67%
Paid Apps	3.31	3.83	4.44	5.13	12.03	15.31%
Total	46.52	52.26	58.78	66.21	138.88	13.07%

Freemium Apps accounted for the largest market share of 77.71% in 2024, with a market Value of USD 40.61 Million and is projected to grow at a CAGR of 13.41% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 7.82 Million in

2024; it is projected to grow at a CAGR of 9.67%. However, Paid Apps is projected to grow at the highest CAGR of 15.31%.

**TABLE 21 EUROPE PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	25.95	29.35	33.23	37.68	82.23	13.82%
Android	18.31	20.46	22.90	25.66	52.18	12.49%
Web-Based	2.25	2.45	2.65	2.87	4.47	7.75%
Total	46.52	52.26	58.78	66.21	138.88	13.07%

iOS accounted for the largest market share of 56.16% in 2024, with a market Value of USD 29.35 Million and is projected to grow at the highest CAGR of 13.82% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 20.46 Million in 2024; it is projected to grow at a CAGR of 12.49%.

**TABLE 22 EUROPE PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

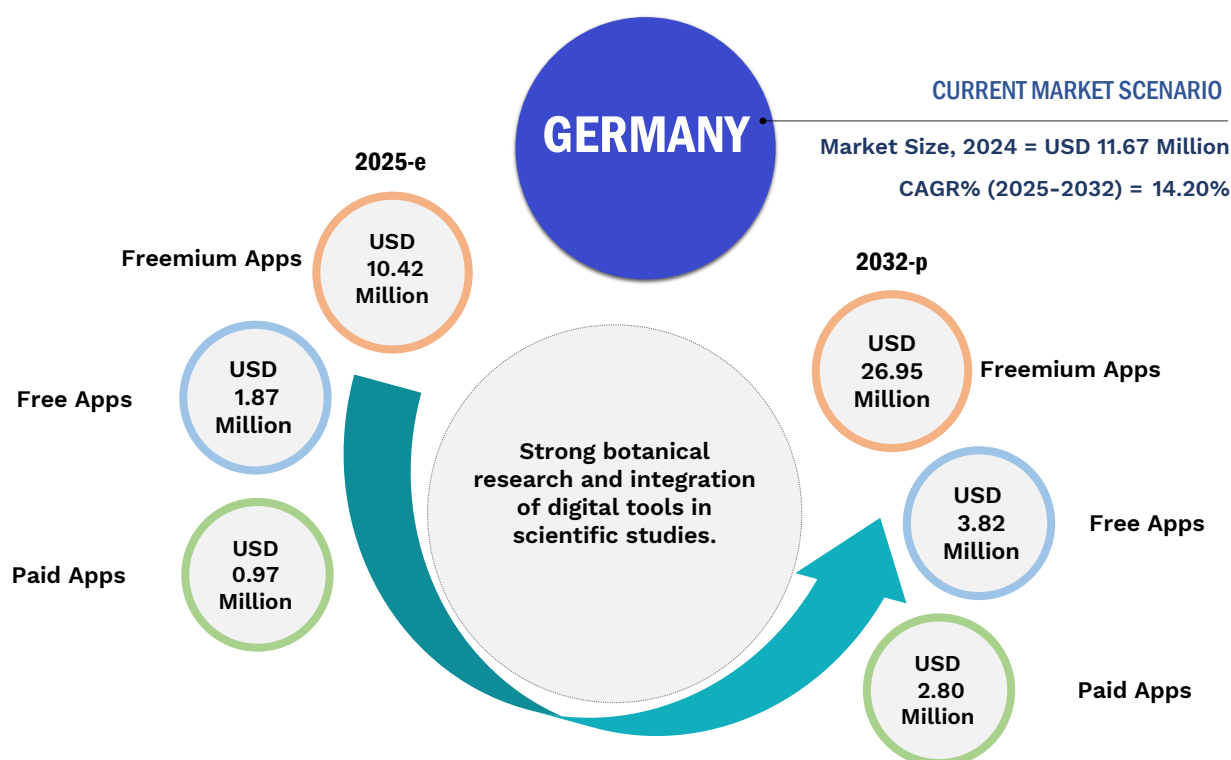
Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	34.58	38.97	43.97	49.67	106.16	13.42%
Text-Based Identification	5.63	5.89	6.18	6.48	8.90	5.35%
Voice Recognition	3.42	3.78	4.19	4.65	8.90	11.35%
Augmented Reality (AR)	2.89	3.62	4.45	5.40	14.93	18.88%
Total	46.52	52.26	58.78	66.21	138.88	13.07%

Image Recognition accounted for the largest market share of 74.56% in 2024, with a market Value of USD 38.97 Million and is projected to grow at a CAGR of 13.42% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD 5.89 Million in 2024; it is projected to grow at a CAGR of 5.35%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 18.88%.



### 8.3.1 GERMANY

**FIGURE 35 GERMANY MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 23 GERMANY PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	8.03	9.14	10.42	11.89	26.95	14.54%
Free Apps	1.54	1.69	1.87	2.06	3.82	10.77%
Paid Apps	0.71	0.83	0.97	1.13	2.80	16.39%
Total	10.28	11.67	13.25	15.08	33.57	14.20%

Freemium Apps accounted for the largest market share of 78.37% in 2024, with a market Value of USD 9.14 Million and is projected to grow at a CAGR of 14.54% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 1.69 Million in 2024; it is projected to grow at a CAGR of 10.77%. However, Paid Apps is projected to grow at the highest CAGR of 16.39%.

**TABLE 24 GERMANY PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	5.90	6.73	7.70	8.82	20.41	14.94%
Android	3.91	4.41	4.99	5.65	12.20	13.63%
Web-Based	0.47	0.52	0.56	0.61	0.96	7.87%
Total	10.28	11.67	13.25	15.08	33.57	14.20%

iOS accounted for the largest market share of 57.73% in 2024, with a market Value of USD 6.73 Million and is projected to grow at the highest CAGR of 14.94% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 4.41 Million in 2024; it is projected to grow at a CAGR of 13.63%.

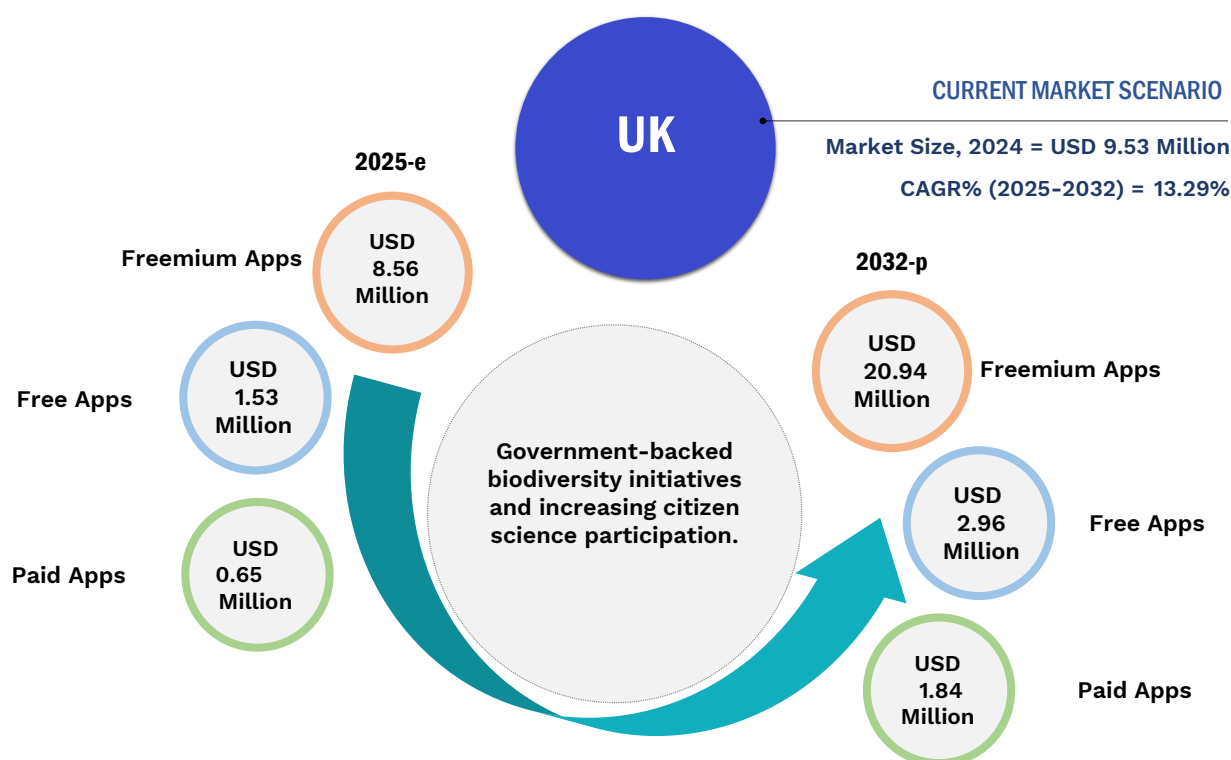
**TABLE 25 GERMANY PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	7.86	8.94	10.19	11.62	26.35	14.54%
Text-Based Identification	1.16	1.22	1.29	1.36	1.96	6.21%
Voice Recognition	0.72	0.80	0.90	1.01	2.05	12.49%
Augmented Reality (AR)	0.55	0.70	0.88	1.08	3.21	20.32%
Total	10.28	11.67	13.25	15.08	33.57	14.20%

Image Recognition accounted for the largest market share of 76.65% in 2024, with a market Value of USD 8.94 Million and is projected to grow at a CAGR of 14.54% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD 1.22 Million in 2024; it is projected to grow at a CAGR of 6.21%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 20.32%.

### 8.3.2 U.K.

**FIGURE 36 U.K. MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 26 U.K. PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	6.71	7.57	8.56	9.69	20.94	13.63%
Free Apps	1.28	1.40	1.53	1.67	2.96	9.90%
Paid Apps	0.48	0.56	0.65	0.76	1.84	15.88%
Total	8.47	9.53	10.74	12.12	25.74	13.29%

Freemium Apps accounted for the largest market share of 79.45% in 2024, with a market Value of USD 7.57 Million and is projected to grow at a CAGR of 13.63% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 1.40 Million in 2024; it is projected to grow at a CAGR of 9.90%. However, Paid Apps is projected to grow at the highest CAGR of 15.88%.

**TABLE 27 U.K. PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032  
(USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	4.81	5.45	6.18	7.02	15.50	14.03%
Android	3.24	3.63	4.07	4.57	9.42	12.73%
Web-Based	0.41	0.45	0.49	0.53	0.82	7.65%
Total	8.47	9.53	10.74	12.12	25.74	13.29%

iOS accounted for the largest market share of 57.19% in 2024, with a market Value of USD 5.45 Million and is projected to grow at the highest CAGR of 14.03% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 3.63 Million in 2024; it is projected to grow at a CAGR of 12.73%.

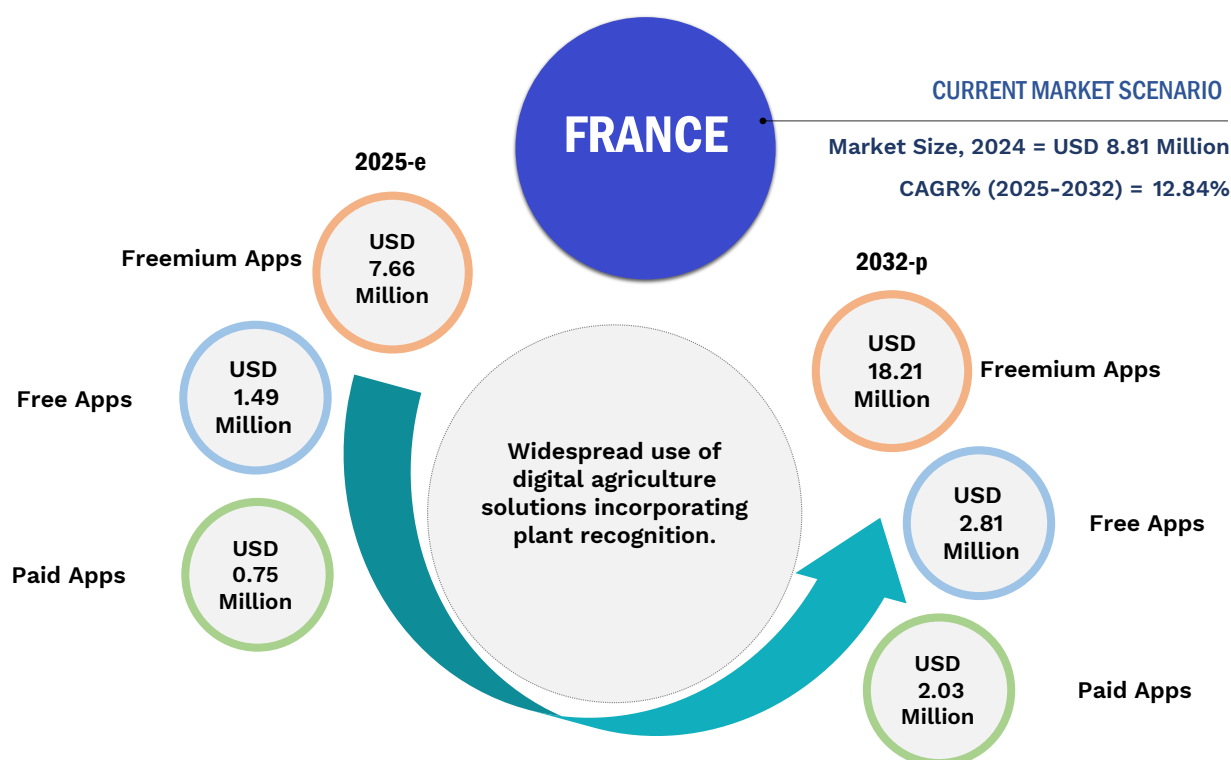
**TABLE 28 U.K. PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	6.38	7.20	8.14	9.22	19.92	13.63%
Text-Based Identification	0.98	1.03	1.07	1.13	1.55	5.36%
Voice Recognition	0.61	0.68	0.75	0.84	1.62	11.60%
Augmented Reality (AR)	0.50	0.62	0.77	0.94	2.64	19.22%
Total	8.47	9.53	10.74	12.12	25.74	13.29%

Image Recognition accounted for the largest market share of 75.59% in 2024, with a market Value of USD 7.20 Million and is projected to grow at a CAGR of 13.63% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD 1.03 Million in 2024; it is projected to grow at a CAGR of 5.36%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 19.22%.

### 8.3.3 FRANCE

**FIGURE 37 FRANCE MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 29 FRANCE PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	6.05	6.80	7.66	8.63	18.21	13.18%
Free Apps	1.26	1.37	1.49	1.63	2.81	9.46%
Paid Apps	0.56	0.64	0.75	0.86	2.03	15.35%
Total	7.86	8.81	9.89	11.12	23.05	12.84%

Freemium Apps accounted for the largest market share of 77.14% in 2024, with a market Value of USD 6.80 Million and is projected to grow at a CAGR of 13.18% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 1.37 Million in 2024; it is projected to grow at a CAGR of 9.46%. However, Paid Apps is projected to grow at the highest CAGR of 15.35%.

**TABLE 30 FRANCE PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	4.38	4.94	5.58	6.31	13.60	13.58%
Android	3.10	3.46	3.87	4.33	8.70	12.28%
Web-Based	0.38	0.41	0.45	0.48	0.75	7.65%
Total	7.86	8.81	9.89	11.12	23.05	12.84%

iOS accounted for the largest market share of 56.03% in 2024, with a market Value of USD 4.94 Million and is projected to grow at the highest CAGR of 13.58% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 3.46 Million in 2024; it is projected to grow at a CAGR of 12.28%.

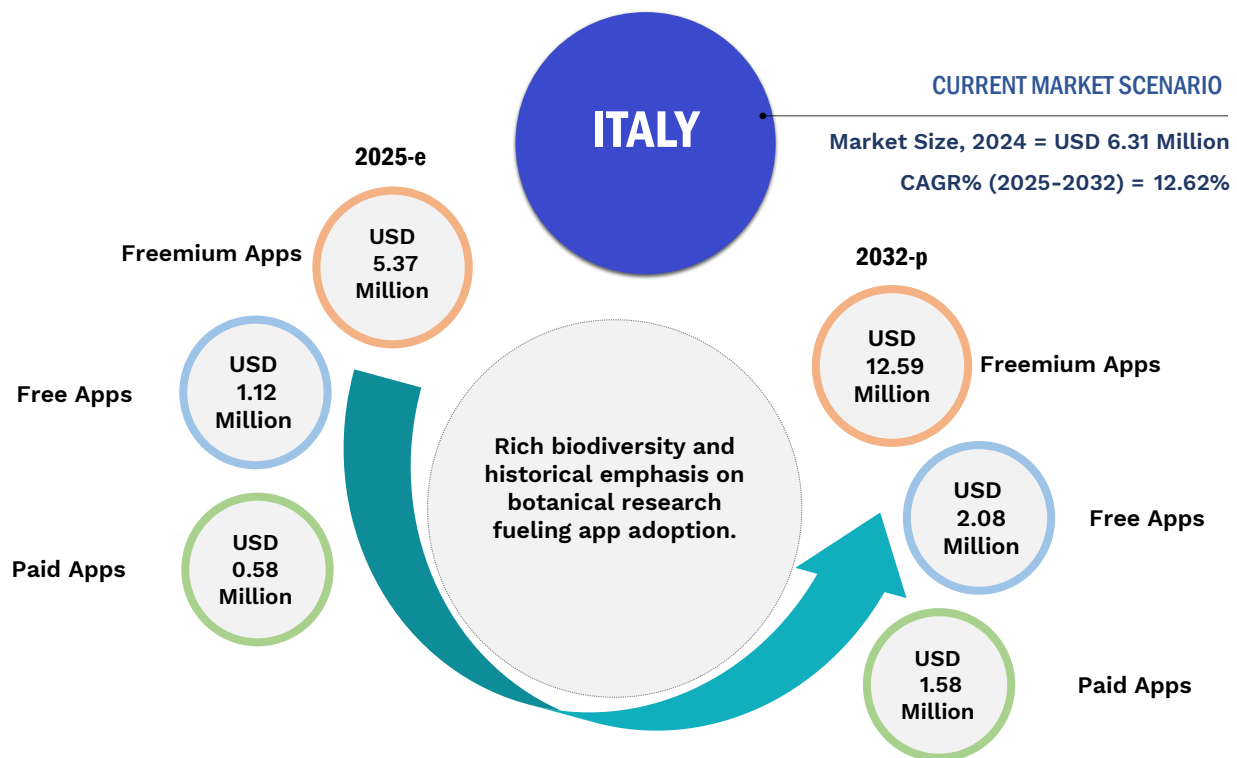
**TABLE 31 FRANCE PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	5.78	6.50	7.31	8.25	17.40	13.18%
Text-Based Identification	0.98	1.02	1.07	1.11	1.49	4.94%
Voice Recognition	0.60	0.67	0.74	0.82	1.55	11.15%
Augmented Reality (AR)	0.50	0.63	0.78	0.94	2.61	18.91%
Total	7.86	8.81	9.89	11.12	23.05	12.84%

Image Recognition accounted for the largest market share of 73.70% in 2024, with a market Value of USD 6.50 Million and is projected to grow at a CAGR of 13.18% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD 1.02 Million in 2024; it is projected to grow at a CAGR of 4.94%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 18.91%.

### 8.3.4 ITALY

**FIGURE 38 ITALY MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 32 ITALY PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	4.26	4.78	5.37	6.04	12.59	12.95%
Free Apps	0.95	1.03	1.12	1.22	2.08	9.24%
Paid Apps	0.44	0.51	0.58	0.68	1.58	15.22%
Total	5.64	6.31	7.07	7.94	16.25	12.62%

Freemium Apps accounted for the largest market share of 75.67% in 2024, with a market Value of USD 4.78 Million and is projected to grow at a CAGR of 12.95% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 1.03 Million in 2024; it is projected to grow at a CAGR of 9.24%. However, Paid Apps is projected to grow at the highest CAGR of 15.22%.

**TABLE 33 ITALY PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032  
(USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	3.10	3.49	3.94	4.44	9.46	13.35%
Android	2.27	2.53	2.82	3.15	6.26	12.05%
Web-Based	0.27	0.29	0.32	0.34	0.53	7.65%
Total	5.64	6.31	7.07	7.94	16.25	12.62%

iOS accounted for the largest market share of 55.28% in 2024, with a market Value of USD 3.49 Million and is projected to grow at the highest CAGR of 13.35% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 2.53 Million in 2024; it is projected to grow at a CAGR of 12.05%.

**TABLE 34 ITALY PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

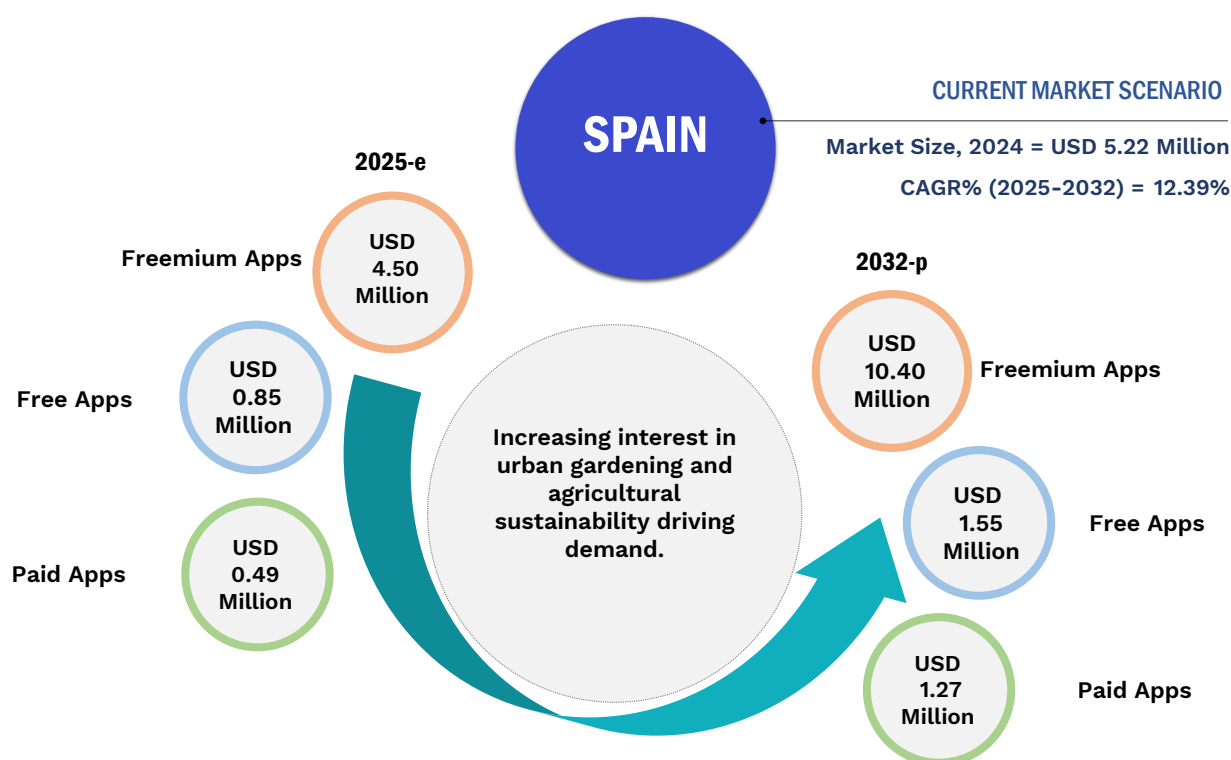
Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	4.12	4.62	5.19	5.84	12.18	12.95%
Text-Based Identification	0.73	0.76	0.79	0.82	1.09	4.73%
Voice Recognition	0.42	0.46	0.51	0.56	1.05	10.93%
Augmented Reality (AR)	0.38	0.48	0.59	0.71	1.93	18.58%
Total	5.64	6.31	7.07	7.94	16.25	12.62%

Image Recognition accounted for the largest market share of 73.16% in 2024, with a market Value of USD 4.62 Million and is projected to grow at a CAGR of 12.95% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .76 Million in 2024; it is projected to grow at a CAGR of 4.73%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 18.58%.



### 8.3.5 SPAIN

**FIGURE 39 SPAIN MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 35 SPAIN PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	3.58	4.01	4.50	5.05	10.40	12.73%
Free Apps	0.72	0.78	0.85	0.92	1.55	9.02%
Paid Apps	0.38	0.43	0.49	0.57	1.27	14.47%
Total	4.68	5.22	5.84	6.54	13.23	12.39%

Freemium Apps accounted for the largest market share of 76.75% in 2024, with a market Value of USD 4.01 Million and is projected to grow at a CAGR of 12.73% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD .78 Million in 2024; it is projected to grow at a CAGR of 9.02%. However, Paid Apps is projected to grow at the highest CAGR of 14.47%.

**TABLE 36 SPAIN PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	2.51	2.83	3.18	3.58	7.54	13.12%
Android	1.92	2.13	2.37	2.64	5.19	11.83%
Web-Based	0.24	0.26	0.29	0.31	0.50	8.30%
Total	4.68	5.22	5.84	6.54	13.23	12.39%

iOS accounted for the largest market share of 54.09% in 2024, with a market Value of USD 2.83 Million and is projected to grow at the highest CAGR of 13.12% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 2.13 Million in 2024; it is projected to grow at a CAGR of 11.83%.

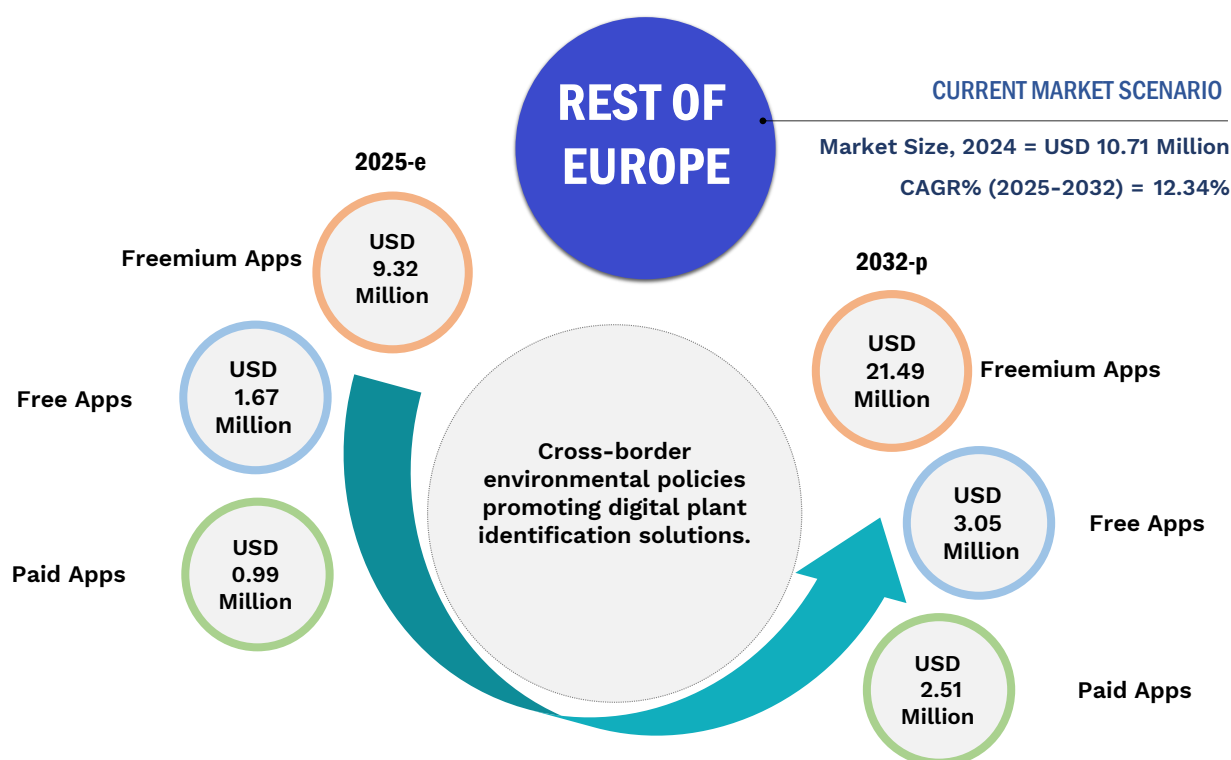
**TABLE 37 SPAIN PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	3.36	3.76	4.22	4.74	9.76	12.73%
Text-Based Identification	0.62	0.64	0.67	0.70	0.91	4.52%
Voice Recognition	0.37	0.40	0.44	0.49	0.91	10.70%
Augmented Reality (AR)	0.33	0.41	0.51	0.61	1.65	18.36%
Total	4.68	5.22	5.84	6.54	13.23	12.39%

Image Recognition accounted for the largest market share of 72.05% in 2024, with a market Value of USD 3.76 Million and is projected to grow at a CAGR of 12.73% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .64 Million in 2024; it is projected to grow at a CAGR of 4.52%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 18.36%.

### 8.3.6 REST OF EUROPE

**FIGURE 40** REST OF EUROPE MARKET SNAPSHOT



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 38** REST OF EUROPE PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	7.42	8.31	9.32	10.47	21.49	12.67%
Free Apps	1.42	1.54	1.67	1.81	3.05	8.97%
Paid Apps	0.75	0.86	0.99	1.13	2.51	14.24%
Total	9.59	10.71	11.98	13.42	27.05	12.34%

Freemium Apps accounted for the largest market share of 77.57% in 2024, with a market Value of USD 8.31 Million and is projected to grow at a CAGR of 12.67% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 1.54 Million in 2024; it is projected to grow at a CAGR of 8.97%. However, Paid Apps is projected to grow at the highest CAGR of 14.24%.

**TABLE 39 REST OF EUROPE PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	5.26	5.91	6.66	7.50	15.72	13.07%
Android	3.86	4.29	4.77	5.32	10.41	11.77%
Web-Based	0.47	0.51	0.55	0.60	0.92	7.58%
Total	9.59	10.71	11.98	13.42	27.05	12.34%

iOS accounted for the largest market share of 55.19% in 2024, with a market Value of USD 5.91 Million and is projected to grow at the highest CAGR of 13.07% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 4.29 Million in 2024; it is projected to grow at a CAGR of 11.77%.

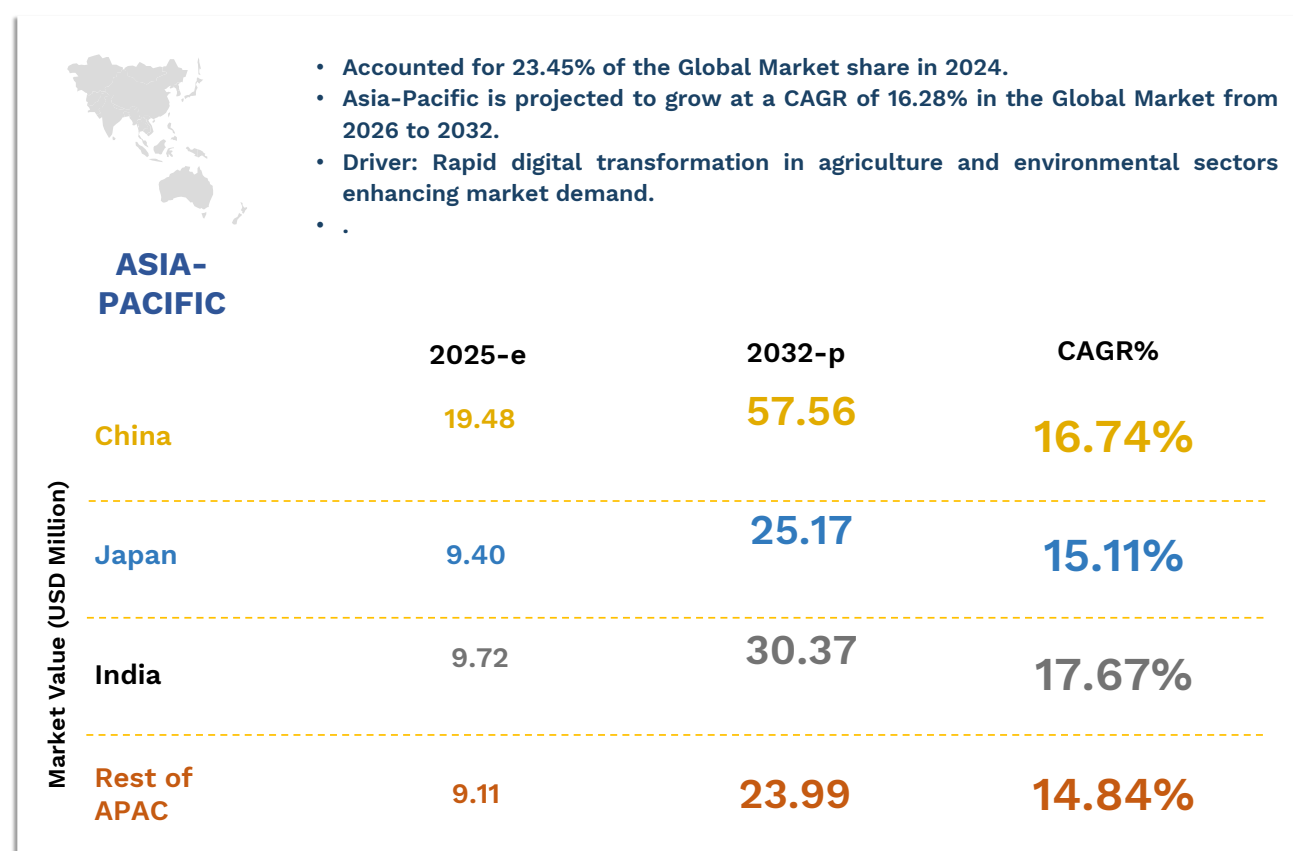
**TABLE 40 REST OF EUROPE PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	7.09	7.94	8.91	10.01	20.54	12.67%
Text-Based Identification	1.17	1.23	1.29	1.36	1.89	5.60%
Voice Recognition	0.70	0.77	0.85	0.94	1.73	10.65%
Augmented Reality (AR)	0.63	0.77	0.93	1.11	2.89	17.57%
Total	9.59	10.71	11.98	13.42	27.05	12.34%

Image Recognition accounted for the largest market share of 74.14% in 2024, with a market Value of USD 7.94 Million and is projected to grow at a CAGR of 12.67% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD 1.23 Million in 2024; it is projected to grow at a CAGR of 5.60%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 17.57%.

## 8.4 ASIA PACIFIC

**FIGURE 41 ASIA PACIFIC MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

The Asia Pacific region, encompassing China, India, Japan, and neighboring countries, presents a burgeoning market for plant identification applications, driven by escalating smartphone adoption, robust governmental biodiversity initiatives, and a deep-rooted cultural affinity for nature. China leads globally in smartphone usage, boasting approximately 859 million users, as reported by Statista. This extensive user base facilitates the widespread adoption of mobile applications, including those for plant identification. India follows closely, with around 700 million smartphone users, reflecting a rapid digital transformation that opens avenues for app developers targeting nature enthusiasts and educational sectors. Japan, with a smartphone penetration rate nearing 60%, also represents a significant market, particularly given its technological infrastructure and consumer readiness to embrace innovative applications.

Governmental policies and conservation efforts further bolster the demand for plant identification apps in the region. China's updated Biodiversity Conservation Strategy and

Action Plan (2023-2030) underscores a national commitment to preserving biodiversity, integrating technology and public participation as pivotal components. This strategic emphasis encourages the development and utilization of digital tools, such as plant identification apps, to engage citizens in conservation efforts. In India, initiatives like the establishment of a "frozen zoo" at Darjeeling Zoo aim to preserve the DNA of endangered species, reflecting a proactive approach to biodiversity conservation. Such projects highlight the significance of technological integration in environmental preservation, creating a conducive environment for the proliferation of related applications. Japan's participation in global biodiversity frameworks and its technological prowess position it well to adopt and innovate in the realm of plant identification applications.

Cultural factors also play a crucial role in the adoption of these applications. In southern India's Nilgiris region, efforts to restore native forests amidst tea plantations underscore a community-driven commitment to ecological restoration. Such initiatives not only enhance biodiversity but also cultivate a societal appreciation for native flora, potentially increasing the demand for plant identification tools among local populations and tourists alike. In Japan, traditional practices like "shinrin-yoku" (forest bathing) reflect a cultural reverence for nature, aligning with the functionalities offered by plant identification apps. China's rich botanical heritage and the cultural importance of traditional medicine further stimulate interest in plant identification, providing a fertile ground for app adoption.

Technological infrastructure in these countries supports the seamless integration of plant identification applications. China's advancements in artificial intelligence and mobile technology enhance the development of sophisticated plant identification features, offering users accurate and efficient tools. India's digital initiatives, such as the Digital India campaign, aim to improve internet connectivity and digital literacy, expanding the potential user base for such applications. Japan's reputation for technological innovation ensures that users have access to high-quality applications with advanced functionalities, catering to both casual users and professionals in fields like botany and environmental science.

Educational sectors in these countries also contribute to the market's growth. In India, the integration of digital tools in educational curricula, especially in environmental studies, promotes the use of plant identification apps as learning aids. China's focus on science and technology education encourages students to engage with applications that offer practical knowledge about native flora. Japan's emphasis on experiential learning and outdoor education aligns with the interactive nature of plant identification apps, facilitating hands-on learning experiences.

**TABLE 41 ASIA PACIFIC PLANT IDENTIFICATION APPS MARKET, BY COUNTRY, 2023-2032 (USD MILLION)**

Country	2023	2024	2025	2026	2032	CAGR (2025-2032)
China	14.46	16.77	19.48	22.65	57.56	16.74%
Japan	7.18	8.21	9.40	10.78	25.17	15.11%
India	7.10	8.31	9.72	11.40	30.37	17.67%
Rest of Asia Pacific	6.96	7.96	9.11	10.44	23.99	14.84%
Total	35.70	41.25	47.71	55.26	137.10	16.28%

China accounted for the largest market share of 40.66% in 2024, with a market Value of USD 16.77 Million and is projected to grow at a CAGR of 16.74% during the forecast period. Japan was the second-largest market in 2024, Value of USD 8.21 Million in 2024; it is projected to grow at a CAGR of 15.11%. However, India is projected to grow at the highest CAGR of 17.67%.

**TABLE 42 ASIA PACIFIC PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	26.50	30.71	35.62	41.36	104.32	16.59%
Free Apps	7.49	8.41	9.44	10.62	22.08	12.90%
Paid Apps	1.70	2.13	2.65	3.28	10.70	22.06%
Total	35.70	41.25	47.71	55.26	137.10	16.28%

Freemium Apps accounted for the largest market share of 74.45% in 2024, with a market Value of USD 30.71 Million and is projected to grow at a CAGR of 16.59% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 8.41 Million in 2024; it is projected to grow at a CAGR of 12.90%. However, Paid Apps is projected to grow at the highest CAGR of 22.06%.

**TABLE 43 ASIA PACIFIC PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	20.27	23.58	27.45	32.00	82.51	17.03%
Android	13.59	15.63	17.98	20.73	49.91	15.70%
Web-Based	1.83	2.04	2.28	2.54	4.67	10.81%
Total	35.70	41.25	47.71	55.26	137.10	16.28%

iOS accounted for the largest market share of 57.16% in 2024, with a market Value of USD 23.58 Million and is projected to grow at the highest CAGR of 17.03% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 15.63 Million in 2024; it is projected to grow at a CAGR of 15.70%.

**TABLE 44 ASIA PACIFIC PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

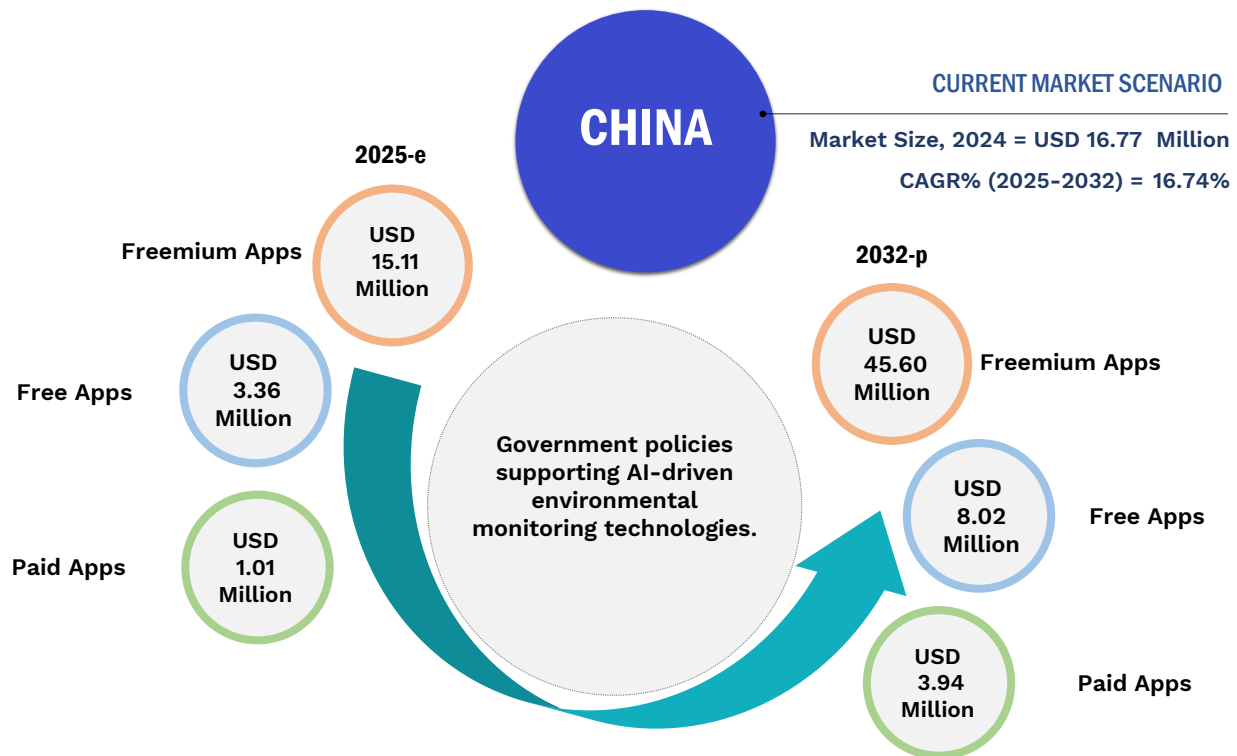
Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	27.87	32.30	37.48	43.54	110.05	16.64%
Text-Based Identification	3.64	3.95	4.29	4.67	7.97	9.24%
Voice Recognition	2.42	2.76	3.14	3.58	8.11	14.50%
Augmented Reality (AR)	1.77	2.24	2.80	3.47	10.98	21.54%
Total	35.70	41.25	47.71	55.26	137.10	16.28%

Image Recognition accounted for the largest market share of 78.31% in 2024, with a market Value of USD 32.30 Million and is projected to grow at a CAGR of 16.64% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD 3.95 Million in 2024; it is projected to grow at a CAGR of 9.24%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 21.54%.



## 8.4.1 CHINA

**FIGURE 42 CHINA MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 45 CHINA PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	11.15	12.97	15.11	17.62	45.60	17.09%
Free Apps	2.65	2.98	3.36	3.79	8.02	13.24%
Paid Apps	0.66	0.82	1.01	1.24	3.94	21.50%
Total	14.46	16.77	19.48	22.65	57.56	16.74%

Freemium Apps accounted for the largest market share of 77.35% in 2024, with a market Value of USD 12.97 Million and is projected to grow at a CAGR of 17.09% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 2.98 Million in 2024; it is projected to grow at a CAGR of 13.24%. However, Paid Apps is projected to grow at the highest CAGR of 21.50%.

**TABLE 46 CHINA PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032  
(USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	8.59	10.03	11.72	13.72	36.25	17.50%
Android	5.09	5.87	6.79	7.85	19.37	16.16%
Web-Based	0.78	0.87	0.97	1.08	1.94	10.48%
Total	14.46	16.77	19.48	22.65	57.56	16.74%

iOS accounted for the largest market share of 59.80% in 2024, with a market Value of USD 10.03 Million and is projected to grow at the highest CAGR of 17.50% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 5.87 Million in 2024; it is projected to grow at a CAGR of 16.16%.

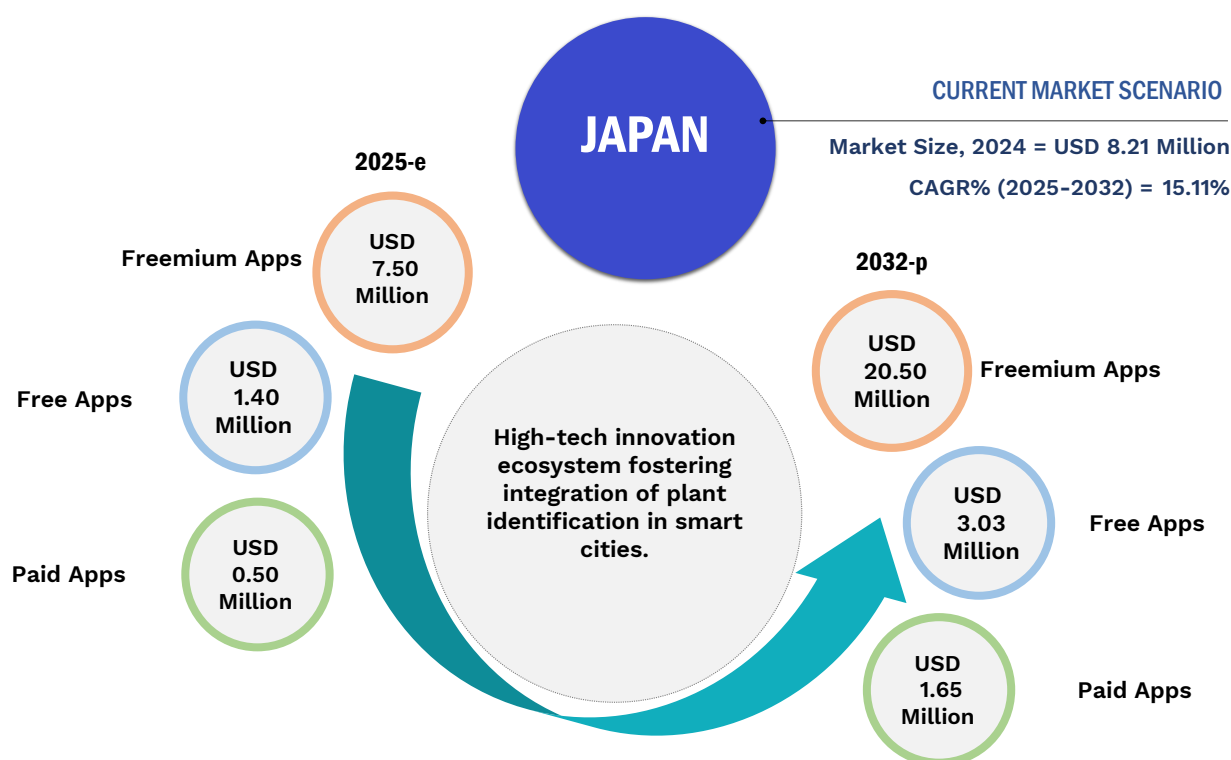
**TABLE 47 CHINA PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	11.36	13.22	15.39	17.95	46.45	17.09%
Text-Based Identification	1.43	1.56	1.70	1.86	3.26	9.74%
Voice Recognition	0.98	1.12	1.28	1.47	3.40	14.99%
Augmented Reality (AR)	0.69	0.88	1.10	1.37	4.44	22.03%
Total	14.46	16.77	19.48	22.65	57.56	16.74%

Image Recognition accounted for the largest market share of 78.80% in 2024, with a market Value of USD 13.22 Million and is projected to grow at a CAGR of 17.09% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD 1.56 Million in 2024; it is projected to grow at a CAGR of 9.74%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 22.03%.

## 8.4.2 JAPAN

**FIGURE 43 JAPAN MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 48 JAPAN PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	5.69	6.53	7.50	8.62	20.50	15.46%
Free Apps	1.14	1.26	1.40	1.56	3.03	11.66%
Paid Apps	0.35	0.42	0.50	0.60	1.65	18.40%
Total	7.18	8.21	9.40	10.78	25.17	15.11%

Freemium Apps accounted for the largest market share of 79.51% in 2024, with a market Value of USD 6.53 Million and is projected to grow at a CAGR of 15.46% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 1.26 Million in 2024; it is projected to grow at a CAGR of 11.66%. However, Paid Apps is projected to grow at the highest CAGR of 18.40%.

**TABLE 49 JAPAN PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032  
(USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	4.11	4.73	5.45	6.29	15.27	15.86%
Android	2.72	3.09	3.53	4.02	9.12	14.54%
Web-Based	0.35	0.39	0.42	0.47	0.78	9.18%
Total	7.18	8.21	9.40	10.78	25.17	15.11%

iOS accounted for the largest market share of 57.60% in 2024, with a market Value of USD 4.73 Million and is projected to grow at the highest CAGR of 15.86% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 3.09 Million in 2024; it is projected to grow at a CAGR of 14.54%.

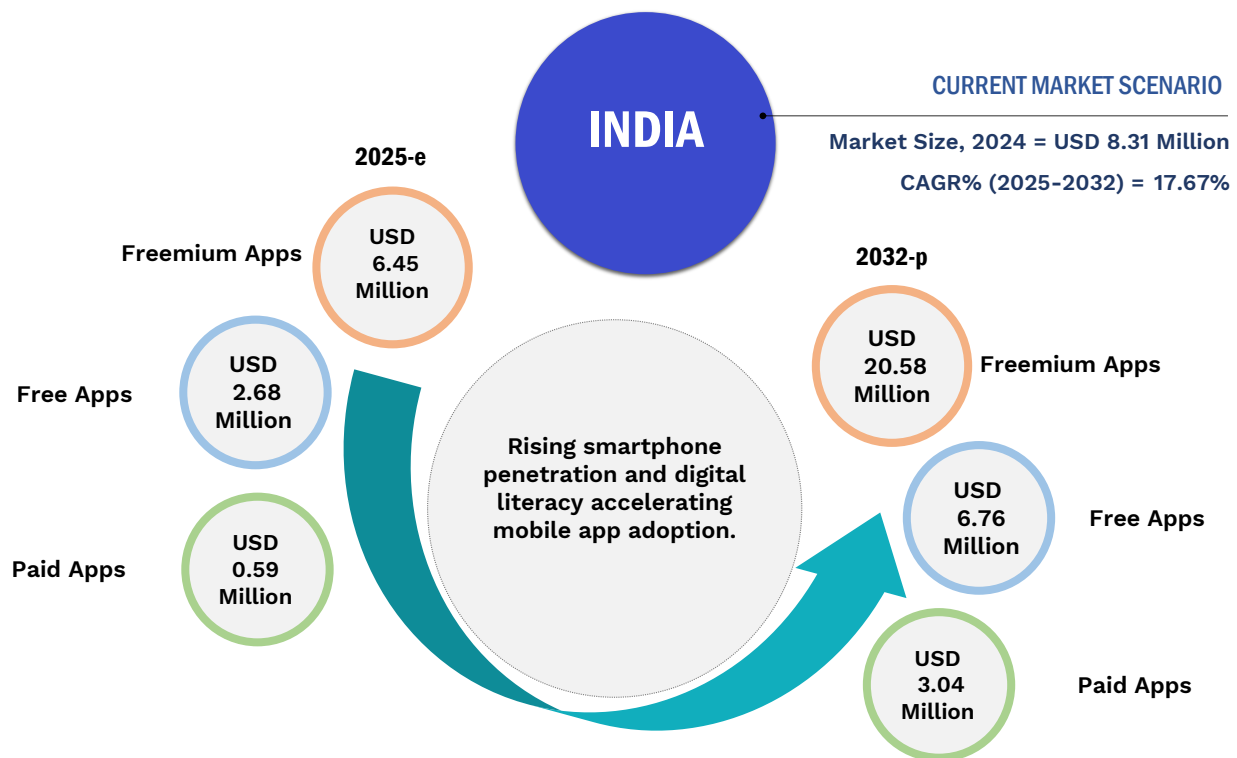
**TABLE 50 JAPAN PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	5.51	6.32	7.26	8.35	19.87	15.46%
Text-Based Identification	0.79	0.85	0.92	0.99	1.59	8.21%
Voice Recognition	0.50	0.57	0.64	0.72	1.54	13.39%
Augmented Reality (AR)	0.37	0.47	0.58	0.71	2.17	20.78%
Total	7.18	8.21	9.40	10.78	25.17	15.11%

Image Recognition accounted for the largest market share of 77.06% in 2024, with a market Value of USD 6.32 Million and is projected to grow at a CAGR of 15.46% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .85 Million in 2024; it is projected to grow at a CAGR of 8.21%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 20.78%.

### 8.4.3 INDIA

**FIGURE 44 INDIA MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 51 INDIA PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	4.69	5.49	6.45	7.58	20.58	18.02%
Free Apps	2.08	2.36	2.68	3.04	6.76	14.14%
Paid Apps	0.34	0.45	0.59	0.77	3.04	26.23%
Total	7.10	8.31	9.72	11.40	30.37	17.67%

Freemium Apps accounted for the largest market share of 66.15% in 2024, with a market Value of USD 5.49 Million and is projected to grow at a CAGR of 18.02% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 2.36 Million in 2024; it is projected to grow at a CAGR of 14.14%. However, Paid Apps is projected to grow at the highest CAGR of 26.23%.

**TABLE 52 INDIA PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	3.76	4.43	5.22	6.15	17.05	18.44%
Android	2.99	3.48	4.06	4.73	12.24	17.08%
Web-Based	0.35	0.40	0.45	0.51	1.08	13.41%
Total	7.10	8.31	9.72	11.40	30.37	17.67%

iOS accounted for the largest market share of 53.30% in 2024, with a market Value of USD 4.43 Million and is projected to grow at the highest CAGR of 18.44% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 3.48 Million in 2024; it is projected to grow at a CAGR of 17.08%.

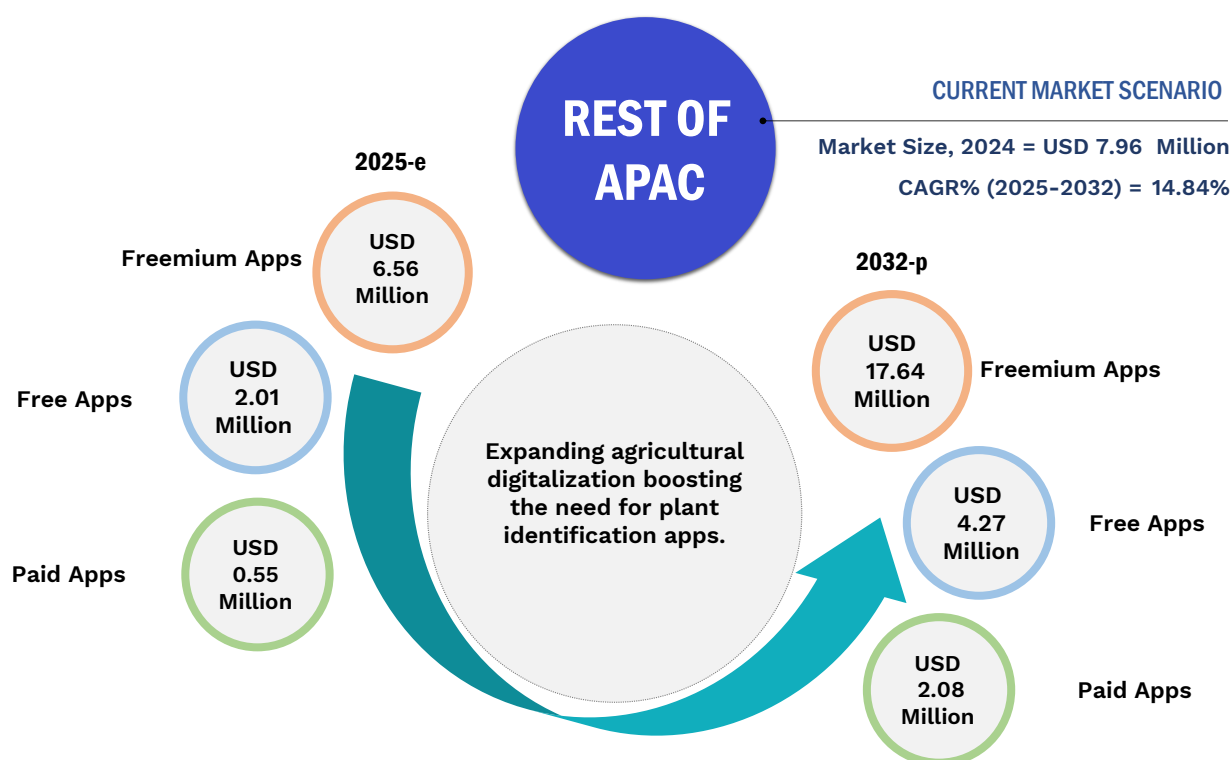
**TABLE 53 INDIA PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	5.62	6.59	7.74	9.10	24.69	18.02%
Text-Based Identification	0.67	0.74	0.81	0.89	1.64	10.61%
Voice Recognition	0.46	0.53	0.61	0.70	1.70	15.91%
Augmented Reality (AR)	0.36	0.45	0.57	0.71	2.34	22.41%
Total	7.10	8.31	9.72	11.40	30.37	17.67%

Image Recognition accounted for the largest market share of 79.36% in 2024, with a market Value of USD 6.59 Million and is projected to grow at a CAGR of 18.02% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .74 Million in 2024; it is projected to grow at a CAGR of 10.61%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 22.41%.

## 8.4.4 REST OF ASIA PACIFIC

**FIGURE 45** REST OF ASIA PACIFIC MARKET SNAPSHOT



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 54** REST OF ASIA PACIFIC PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	4.98	5.71	6.56	7.53	17.64	15.18%
Free Apps	1.63	1.81	2.01	2.23	4.27	11.39%
Paid Apps	0.35	0.44	0.55	0.67	2.08	21.12%
Total	6.96	7.96	9.11	10.44	23.99	14.84%

Freemium Apps accounted for the largest market share of 71.77% in 2024, with a market Value of USD 5.71 Million and is projected to grow at a CAGR of 15.18% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 1.81 Million in 2024; it is projected to grow at a CAGR of 11.39%. However, Paid Apps is projected to grow at the highest CAGR of 21.12%.

**TABLE 55 REST OF ASIA PACIFIC PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	3.82	4.39	5.06	5.83	13.94	15.58%
Android	2.79	3.17	3.61	4.12	9.19	14.26%
Web-Based	0.36	0.39	0.44	0.48	0.86	10.17%
Total	6.96	7.96	9.11	10.44	23.99	14.84%

iOS accounted for the largest market share of 55.18% in 2024, with a market Value of USD 4.39 Million and is projected to grow at the highest CAGR of 15.58% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 3.17 Million in 2024; it is projected to grow at a CAGR of 14.26%.

**TABLE 56 REST OF ASIA PACIFIC PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

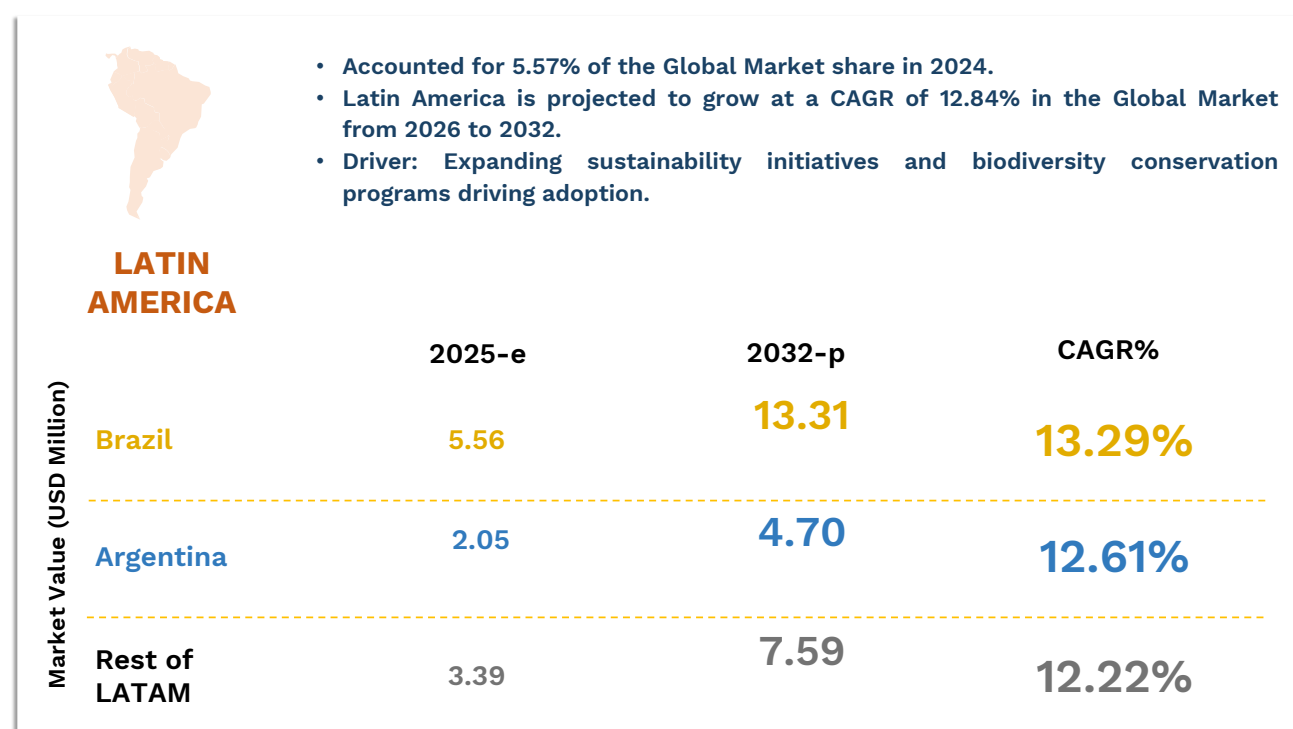
Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	5.38	6.17	7.08	8.13	19.04	15.18%
Text-Based Identification	0.75	0.80	0.86	0.93	1.48	7.95%
Voice Recognition	0.49	0.55	0.62	0.70	1.46	13.11%
Augmented Reality (AR)	0.35	0.44	0.55	0.68	2.02	20.40%
Total	6.96	7.96	9.11	10.44	23.99	14.84%

Image Recognition accounted for the largest market share of 77.47% in 2024, with a market Value of USD 6.17 Million and is projected to grow at a CAGR of 15.18% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .80 Million in 2024; it is projected to grow at a CAGR of 7.95%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 20.40%.



## 8.5 LATIN AMERICA

**FIGURE 46** LATIN AMERICA MARKET SNAPSHOT



Source: Verified Market Research, e-Estimated & p-Projected

The Latin American market for plant identification applications is experiencing notable growth, propelled by increasing smartphone adoption, governmental biodiversity initiatives, and a rich cultural connection to nature. In Brazil, the National Biodiversity Commission (Conabio) has established 23 new biodiversity conservation goals for the 2025-2030 period, reinforcing the country's commitment to environmental preservation. Similarly, Argentina has implemented various initiatives aimed at promoting biodiversity conservation and protecting endangered species, reflecting a proactive approach to environmental preservation. These governmental policies create a supportive environment for the adoption of plant identification apps, as they align with national priorities and receive institutional backing.

Cultural factors also play a significant role in the adoption of these applications. In Argentina, initiatives like the "Paisaje Productivo Protegido" (Protected Productive Landscape) program, led by the Fundación ProYungas, integrate agroforestry production with environmental conservation. This program manages and protects approximately 2.7 million hectares, of which 40% are wild areas, demonstrating that profitable production can be sustainable and benefit the ecosystem. Such initiatives not only enhance

biodiversity but also cultivate a societal appreciation for native flora, potentially increasing the demand for plant identification tools among local populations and tourists alike.

Technological infrastructure in these countries supports the integration of plant identification applications. Brazil's advancements in mobile technology enhance the development of sophisticated plant identification features, offering users accurate and efficient tools. Argentina's digital initiatives aim to improve internet connectivity and digital literacy, expanding the potential user base for such applications. These technological advancements ensure that users have access to high-quality applications with advanced functionalities, catering to both casual users and professionals in fields like botany and environmental science.

Educational sectors in these countries also contribute to the market's growth. In Argentina, the integration of digital tools in educational curricula, especially in environmental studies, promotes the use of plant identification apps as learning aids. Brazil's focus on science and technology education encourages students to engage with applications that offer practical knowledge about native flora. This emphasis on experiential learning and outdoor education aligns with the interactive nature of plant identification apps, facilitating hands-on learning experiences.

**TABLE 57 LATIN AMERICA PLANT IDENTIFICATION APPS MARKET, BY COUNTRY, 2023-2032 (USD MILLION)**

Country	2023	2024	2025	2026	2032	CAGR (2025-2032)
Brazil	4.38	4.93	5.56	6.27	13.31	13.29%
Argentina	1.63	1.83	2.05	2.29	4.70	12.61%
Rest of Latin America	2.72	3.03	3.39	3.79	7.59	12.22%
Total	8.73	9.79	10.99	12.35	25.60	12.84%

Brazil accounted for the largest market share of 50.35% in 2024, with a market Value of USD 4.93 Million and is projected to grow at the highest CAGR of 13.29% during the forecast period. Argentina accounted for the second-largest market in 2024, Value of USD 1.83 Million in 2024; it is projected to grow at a CAGR of 12.61%.

**TABLE 58 LATIN AMERICA PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	5.84	6.57	7.40	8.34	17.59	13.17%
Free Apps	2.43	2.64	2.88	3.14	5.42	9.47%
Paid Apps	0.46	0.58	0.71	0.87	2.58	20.18%
Total	8.73	9.79	10.99	12.35	25.60	12.84%

Freemium Apps accounted for the largest market share of 67.11% in 2024, with a market Value of USD 6.57 Million and is projected to grow at a CAGR of 13.17% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 2.64 Million in 2024; it is projected to grow at a CAGR of 9.47%. However, Paid Apps is projected to grow at the highest CAGR of 20.18%.

**TABLE 59 LATIN AMERICA PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	4.63	5.22	5.90	6.67	14.38	13.58%
Android	3.68	4.10	4.58	5.13	10.30	12.27%
Web-Based	0.43	0.47	0.51	0.55	0.91	8.73%
Total	8.73	9.79	10.99	12.35	25.60	12.84%

iOS accounted for the largest market share of 53.33% in 2024, with a market Value of USD 5.22 Million and is projected to grow at the highest CAGR of 13.58% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 4.10 Million in 2024; it is projected to grow at a CAGR of 12.27%.

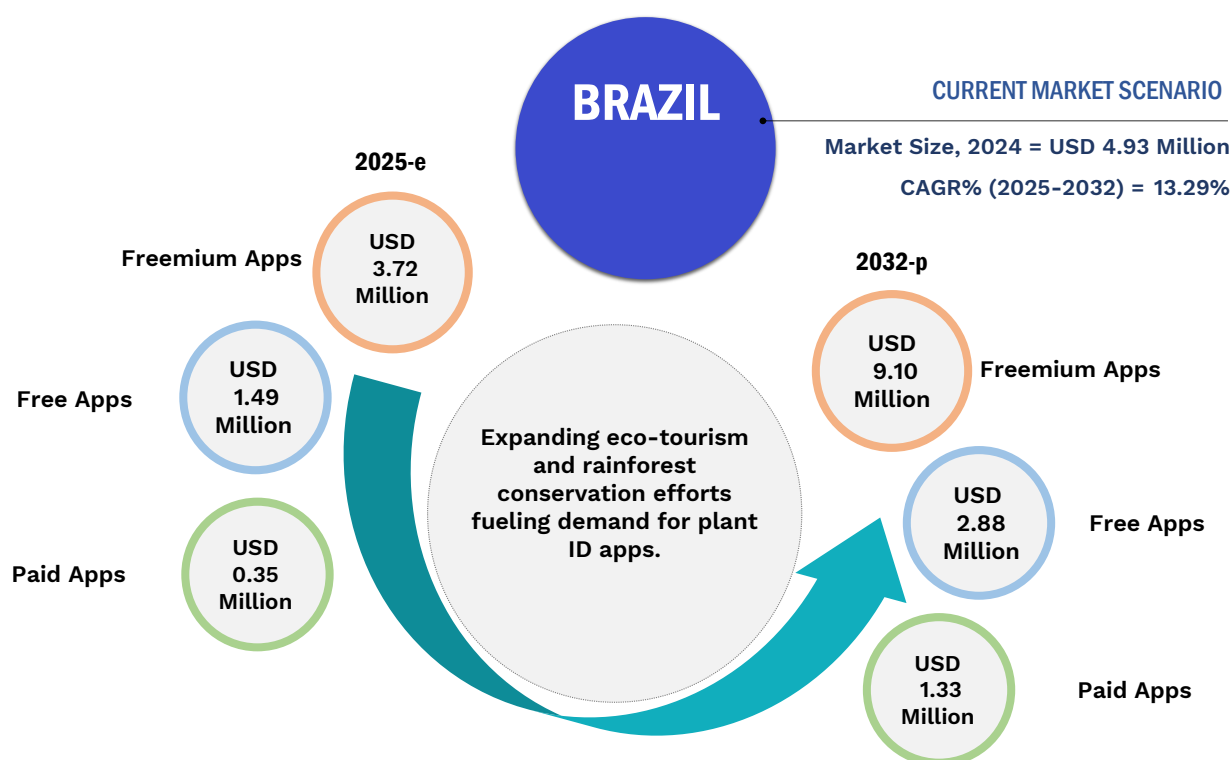
**TABLE 60 LATIN AMERICA PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	6.26	7.04	7.92	8.93	18.85	13.18%
Text-Based Identification	1.13	1.20	1.27	1.35	1.99	6.62%
Voice Recognition	0.67	0.74	0.82	0.91	1.71	11.11%
Augmented Reality (AR)	0.68	0.82	0.98	1.17	3.05	17.58%
Total	8.73	9.79	10.99	12.35	25.60	12.84%

Image Recognition accounted for the largest market share of 71.86% in 2024, with a market Value of USD 7.04 Million and is projected to grow at a CAGR of 13.18% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD 1.20 Million in 2024; it is projected to grow at a CAGR of 6.62%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 17.58%.

## 8.5.1 BRAZIL

**FIGURE 47 BRAZIL MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 61 BRAZIL PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	2.91	3.29	3.72	4.21	9.10	13.63%
Free Apps	1.25	1.36	1.49	1.63	2.88	9.89%
Paid Apps	0.22	0.28	0.35	0.43	1.33	21.07%
Total	4.38	4.93	5.56	6.27	13.31	13.29%

Freemium Apps accounted for the largest market share of 66.74% in 2024, with a market Value of USD 3.29 Million and is projected to grow at a CAGR of 13.63% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 1.36 Million in 2024; it is projected to grow at a CAGR of 9.89%. However, Paid Apps is projected to grow at the highest CAGR of 21.07%.

**TABLE 62 BRAZIL PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032  
(USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	2.35	2.66	3.02	3.43	7.57	14.03%
Android	1.82	2.04	2.28	2.56	5.28	12.72%
Web-Based	0.21	0.23	0.25	0.28	0.46	8.88%
Total	4.38	4.93	5.56	6.27	13.31	13.29%

iOS accounted for the largest market share of 54.00% in 2024, with a market Value of USD 2.66 Million and is projected to grow at the highest CAGR of 14.03% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 2.04 Million in 2024; it is projected to grow at a CAGR of 12.72%.

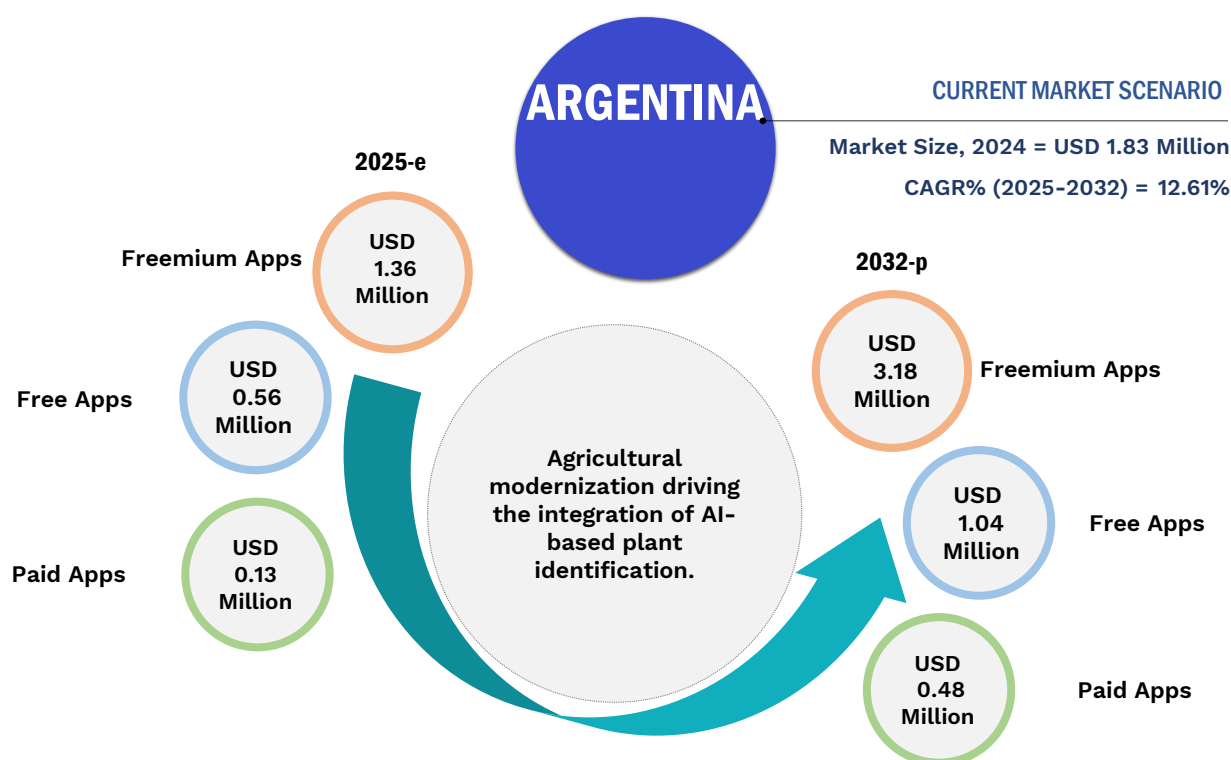
**TABLE 63 BRAZIL PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	3.18	3.59	4.06	4.60	9.93	13.63%
Text-Based Identification	0.54	0.58	0.61	0.65	0.95	6.49%
Voice Recognition	0.33	0.36	0.40	0.45	0.87	11.59%
Augmented Reality (AR)	0.33	0.40	0.48	0.58	1.56	18.25%
Total	4.38	4.93	5.56	6.27	13.31	13.29%

Image Recognition accounted for the largest market share of 72.86% in 2024, with a market Value of USD 3.59 Million and is projected to grow at a CAGR of 13.63% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .58 Million in 2024; it is projected to grow at a CAGR of 6.49%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 18.25%.

## 8.5.2 ARGENTINA

**FIGURE 48 ARGENTINA MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 64 ARGENTINA PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	1.08	1.21	1.36	1.53	3.18	12.95%
Free Apps	0.47	0.51	0.56	0.61	1.04	9.24%
Paid Apps	0.08	0.10	0.13	0.16	0.48	20.49%
Total	1.63	1.83	2.05	2.29	4.70	12.61%

Freemium Apps accounted for the largest market share of 66.15% in 2024, with a market Value of USD 1.21 Million and is projected to grow at a CAGR of 12.95% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD .51 Million in 2024; it is projected to grow at a CAGR of 9.24%. However, Paid Apps is projected to grow at the highest CAGR of 20.49%.

**TABLE 65 ARGENTINA PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	0.86	0.97	1.10	1.24	2.63	13.35%
Android	0.69	0.77	0.86	0.96	1.90	12.05%
Web-Based	0.08	0.09	0.09	0.10	0.17	8.53%
Total	1.63	1.83	2.05	2.29	4.70	12.61%

iOS accounted for the largest market share of 53.18% in 2024, with a market Value of USD .97 Million and is projected to grow at the highest CAGR of 13.35% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD .77 Million in 2024; it is projected to grow at a CAGR of 12.05%.

**TABLE 66 ARGENTINA PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

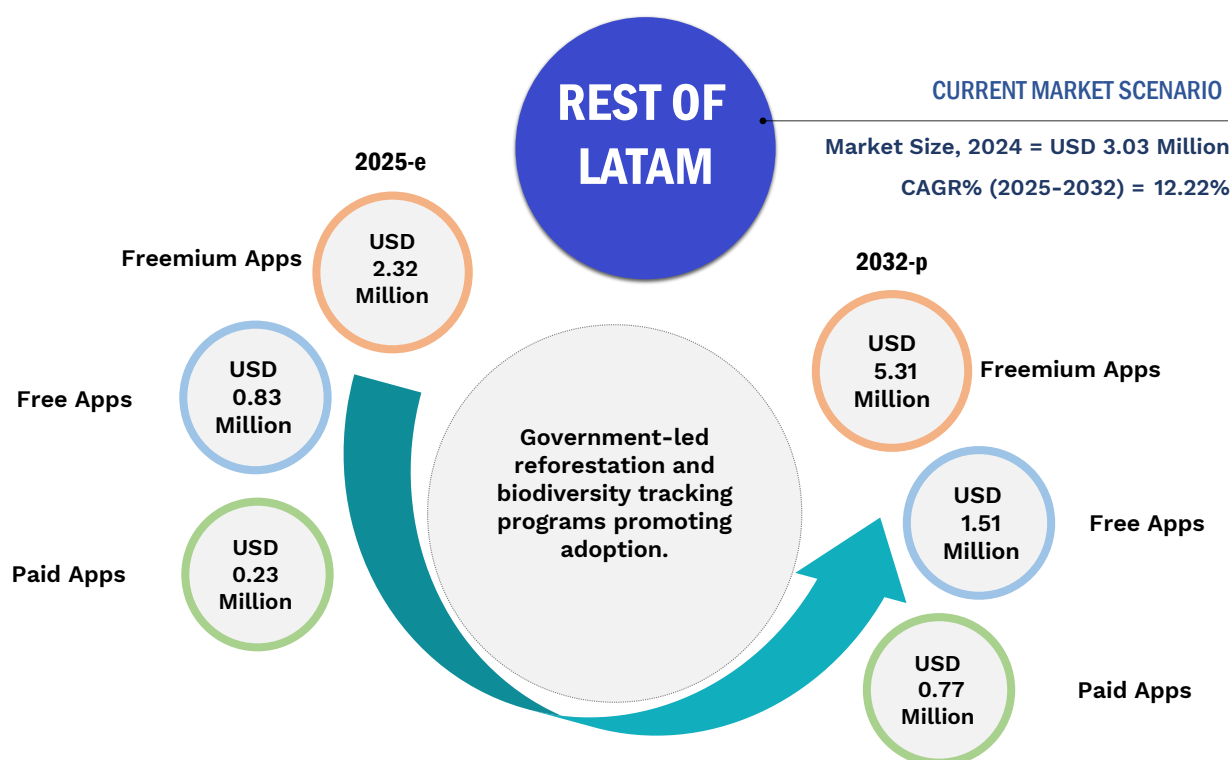
Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	1.17	1.31	1.47	1.65	3.45	12.95%
Text-Based Identification	0.21	0.23	0.24	0.26	0.39	6.98%
Voice Recognition	0.13	0.14	0.15	0.17	0.31	10.81%
Augmented Reality (AR)	0.13	0.15	0.18	0.22	0.55	17.15%
Total	1.63	1.83	2.05	2.29	4.70	12.61%

Image Recognition accounted for the largest market share of 71.60% in 2024, with a market Value of USD 1.31 Million and is projected to grow at a CAGR of 12.95% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .23 Million in 2024; it is projected to grow at a CAGR of 6.98%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 17.15%.



### 8.5.3 REST OF LATIN AMERICA

**FIGURE 49** REST OF LATIN AMERICA MARKET SNAPSHOT



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 67** REST OF LATIN AMERICA PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	1.85	2.07	2.32	2.60	5.31	12.55%
Free Apps	0.71	0.77	0.83	0.90	1.51	8.85%
Paid Apps	0.16	0.19	0.23	0.28	0.77	18.58%
Total	2.72	3.03	3.39	3.79	7.59	12.22%

Freemium Apps accounted for the largest market share of 68.30% in 2024, with a market Value of USD 2.07 Million and is projected to grow at a CAGR of 12.55% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD .77 Million in 2024; it is projected to grow at a CAGR of 8.85%. However, Paid Apps is projected to grow at the highest CAGR of 18.58%.

**TABLE 68 REST OF LATIN AMERICA PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	1.41	1.59	1.78	2.01	4.18	12.94%
Android	1.17	1.30	1.44	1.61	3.12	11.65%
Web-Based	0.14	0.15	0.16	0.18	0.29	8.59%
Total	2.72	3.03	3.39	3.79	7.59	12.22%

iOS accounted for the largest market share of 52.32% in 2024, with a market Value of USD 1.59 Million and is projected to grow at the highest CAGR of 12.94% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 1.30 Million in 2024; it is projected to grow at a CAGR of 11.65%.

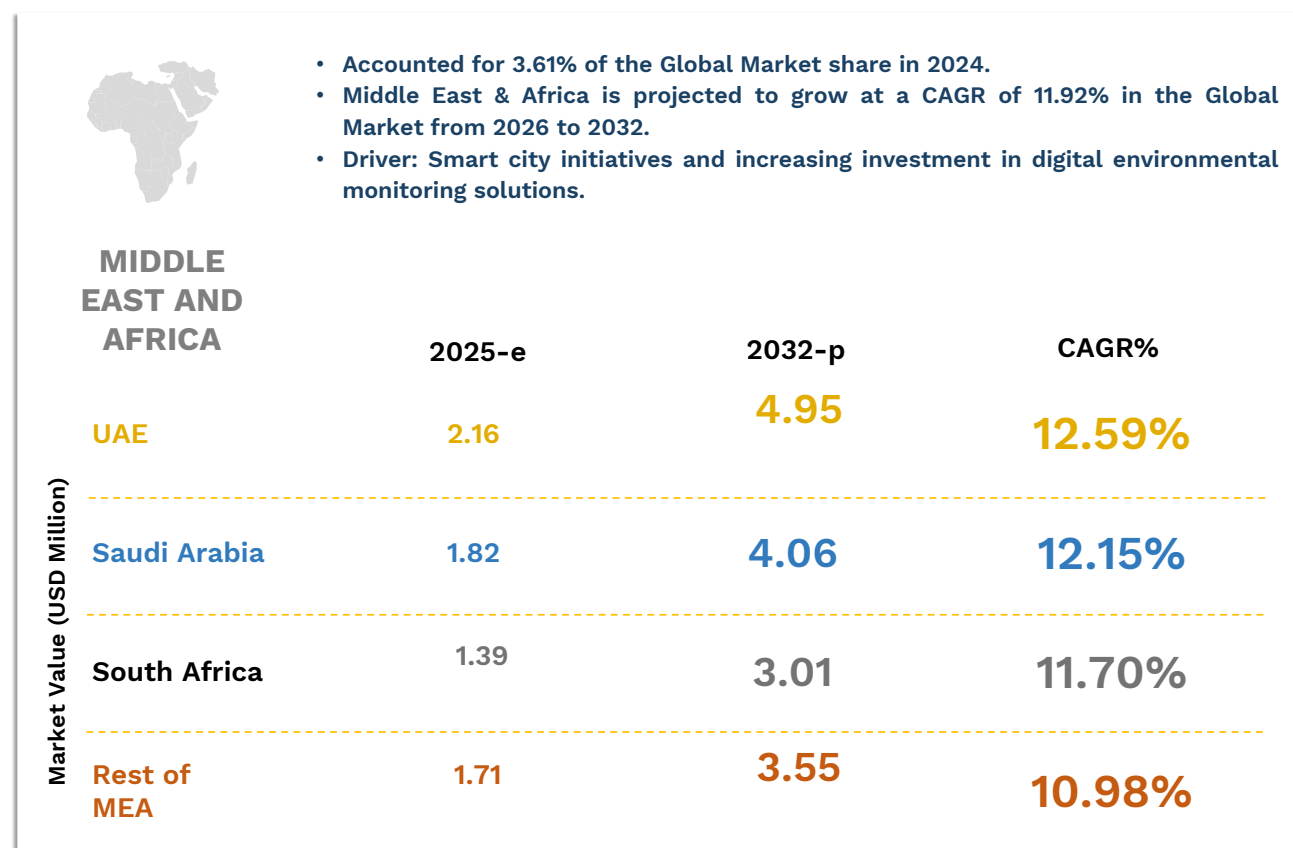
**TABLE 69 REST OF LATIN AMERICA PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	1.91	2.14	2.39	2.68	5.47	12.55%
Text-Based Identification	0.37	0.39	0.42	0.44	0.65	6.60%
Voice Recognition	0.22	0.24	0.26	0.29	0.53	10.53%
Augmented Reality (AR)	0.22	0.27	0.32	0.37	0.93	16.78%
Total	2.72	3.03	3.39	3.79	7.59	12.22%

Image Recognition accounted for the largest market share of 70.39% in 2024, with a market Value of USD 2.14 Million and is projected to grow at a CAGR of 12.55% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .39 Million in 2024; it is projected to grow at a CAGR of 6.60%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 16.78%.

## 8.6 MIDDLE EAST AND AFRICA

**FIGURE 50 MIDDLE EAST AND AFRICA MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

The Middle East and Africa (MEA) region, encompassing countries such as Saudi Arabia, the United Arab Emirates (UAE), South Africa, and others, presents a burgeoning market for plant identification applications. This growth is driven by increasing smartphone penetration, governmental biodiversity initiatives, and a cultural emphasis on environmental conservation.

In the Middle East, smartphone adoption has seen significant growth. In Saudi Arabia, the smartphone penetration rate reached approximately 72.8% in 2018, indicating a substantial user base for mobile applications. Similarly, the UAE has experienced high smartphone penetration, with rates around 73.8% in 2018, reflecting a tech-savvy population open to adopting new applications. This widespread smartphone usage provides a solid foundation for the proliferation of plant identification apps.

In Africa, South Africa's smartphone penetration was approximately 35.5% in 2018, translating to over 20 million users. While this rate is lower compared to some Middle

Eastern countries, it still represents a significant and growing market for mobile applications, including those focused on plant identification.

Governmental and regional initiatives in the MEA region have increasingly focused on biodiversity conservation, creating a conducive environment for the adoption of plant identification applications. In Saudi Arabia, environmental preservation has gained prominence, aligning with the goals of Vision 2030 to promote sustainable development. The UAE has also demonstrated commitment to biodiversity through various conservation projects, such as the establishment of protected areas and wildlife reserves. These initiatives underscore the importance of environmental awareness and education, areas where plant identification apps can play a pivotal role.

In Africa, countries like Tanzania have been active in conservation efforts. However, these initiatives have sometimes led to conflicts with indigenous communities, as seen with the evictions of Maasai herders from the Ngorongoro Conservation Area to make way for tourism and carbon-credit projects. Such events highlight the complex dynamics between conservation efforts and local populations. Despite these challenges, there is a growing recognition of the need to balance environmental preservation with community rights, creating opportunities for educational tools like plant identification apps to bridge knowledge gaps and promote sustainable practices.

Cultural factors also influence the adoption of plant identification applications in the MEA region. In many Middle Eastern cultures, there is a historical connection to traditional medicine and the use of native plants, which can drive interest in flora identification. In African countries, ecotourism and safaris are integral to the economy and cultural identity. For instance, Tanzania's Grumeti Reserve has been lauded for its successful conservation efforts, attracting tourists worldwide. Plant identification apps can enhance the ecotourism experience by providing visitors with interactive tools to learn about local flora, thereby enriching their engagement with natural landscapes.

**TABLE 70 MIDDLE EAST AND AFRICA PLANT IDENTIFICATION APPS MARKET, BY COUNTRY, 2023-2032 (USD MILLION)**

Country	2023	2024	2025	2026	2032	CAGR (2025-2032)
Saudi Arabia	1.72	1.93	2.16	2.42	4.95	12.59%
UAE	1.46	1.63	1.82	2.03	4.06	12.15%
South Africa	1.13	1.25	1.39	1.55	3.01	11.70%
Rest of Middle East and Africa	1.41	1.55	1.71	1.90	3.55	10.98%
Total	5.72	6.36	7.08	7.89	15.58	11.92%

Saudi Arabia accounted for the largest market share of 30.28% in 2024, with a market Value of USD 1.93 Million and is projected to grow at the highest CAGR of 12.59% during the forecast period. UAE accounted for the second-largest market in 2024, Value of USD 1.63 Million in 2024; it is projected to grow at a CAGR of 12.15%.

**TABLE 71 MIDDLE EAST AND AFRICA PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	3.99	4.46	4.98	5.56	11.18	12.27%
Free Apps	1.39	1.50	1.62	1.75	2.88	8.54%
Paid Apps	0.33	0.40	0.48	0.58	1.52	17.73%
Total	5.72	6.36	7.08	7.89	15.58	11.92%

Freemium Apps accounted for the largest market share of 70.07% in 2024, with a market Value of USD 4.46 Million and is projected to grow at a CAGR of 12.27% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD 1.50 Million in 2024; it is projected to grow at a CAGR of 8.54%. However, Paid Apps is projected to grow at the highest CAGR of 17.73%.

**TABLE 72 MIDDLE EAST AND AFRICA PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	3.07	3.44	3.86	4.33	8.89	12.67%
Android	2.34	2.59	2.87	3.18	6.09	11.34%
Web-Based	0.30	0.33	0.35	0.38	0.60	7.85%
Total	5.72	6.36	7.08	7.89	15.58	11.92%

iOS accounted for the largest market share of 54.11% in 2024, with a market Value of USD 3.44 Million and is projected to grow at the highest CAGR of 12.67% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD 2.59 Million in 2024; it is projected to grow at a CAGR of 11.34%.

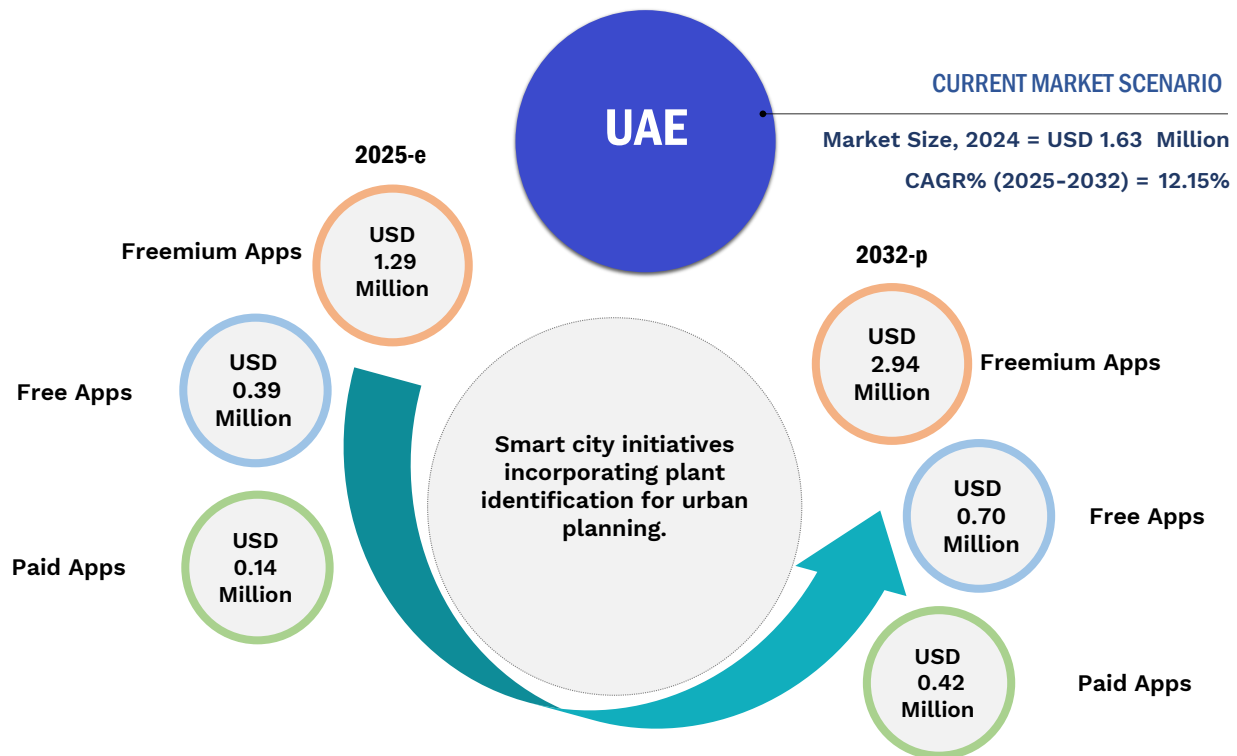
**TABLE 73 MIDDLE EAST AND AFRICA PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	4.14	4.62	5.16	5.77	11.59	12.27%
Text-Based Identification	0.73	0.76	0.80	0.83	1.13	5.18%
Voice Recognition	0.44	0.48	0.52	0.58	1.04	10.22%
Augmented Reality (AR)	0.42	0.50	0.60	0.72	1.82	17.03%
Total	5.72	6.36	7.08	7.89	15.58	11.92%

Image Recognition accounted for the largest market share of 72.60% in 2024, with a market Value of USD 4.62 Million and is projected to grow at a CAGR of 12.27% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .76 Million in 2024; it is projected to grow at a CAGR of 5.18%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 17.03%.

## 8.6.1 UAE

**FIGURE 51 UAE MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 74 UAE PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	1.03	1.15	1.29	1.45	2.94	12.48%
Free Apps	0.33	0.36	0.39	0.42	0.70	8.78%
Paid Apps	0.10	0.12	0.14	0.17	0.42	16.88%
Total	1.46	1.63	1.82	2.03	4.06	12.15%

Freemium Apps accounted for the largest market share of 70.77% in 2024, with a market Value of USD 1.15 Million and is projected to grow at a CAGR of 12.48% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD .36 Million in 2024; it is projected to grow at a CAGR of 8.78%. However, Paid Apps is projected to grow at the highest CAGR of 16.88%.

**TABLE 75 UAE PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	0.80	0.89	1.00	1.13	2.34	12.88%
Android	0.59	0.66	0.73	0.81	1.57	11.59%
Web-Based	0.08	0.08	0.09	0.10	0.15	7.75%
Total	1.46	1.63	1.82	2.03	4.06	12.15%

iOS accounted for the largest market share of 54.83% in 2024, with a market Value of USD .89 Million and is projected to grow at the highest CAGR of 12.88% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD .66 Million in 2024; it is projected to grow at a CAGR of 11.59%.

**TABLE 76 UAE PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

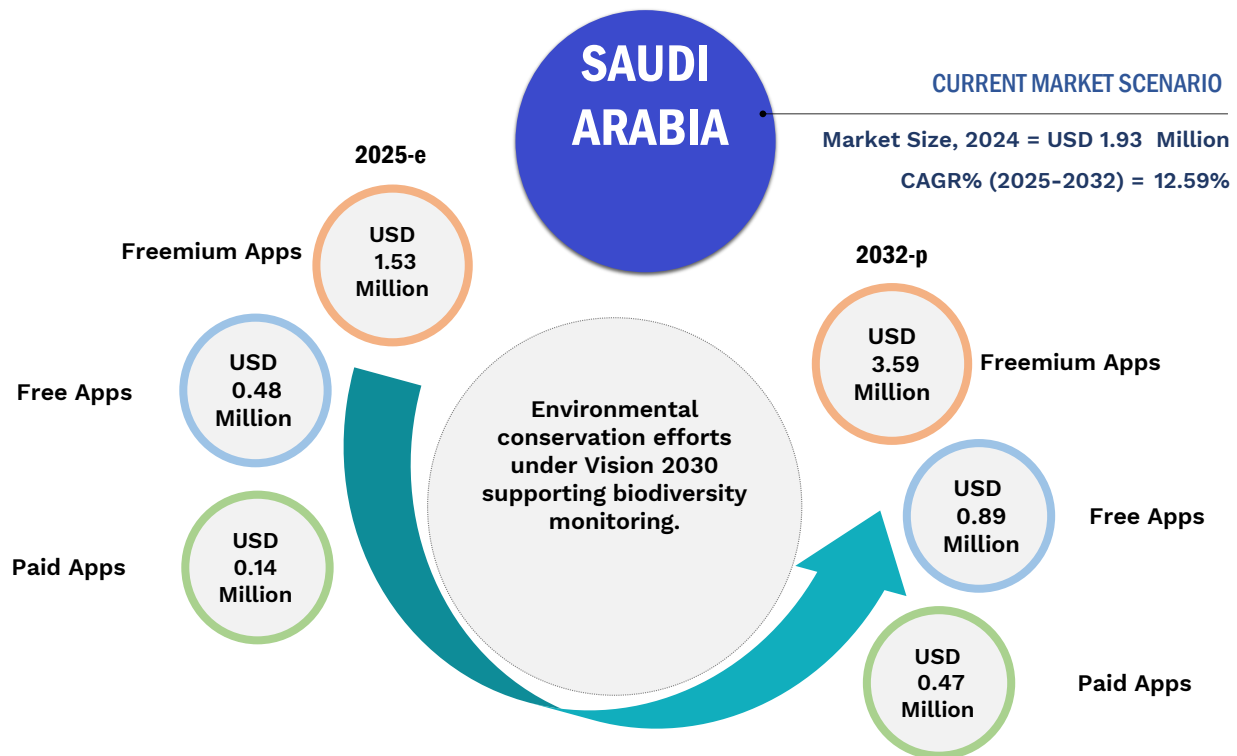
Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	1.07	1.19	1.33	1.50	3.04	12.48%
Text-Based Identification	0.18	0.19	0.20	0.21	0.29	5.42%
Voice Recognition	0.11	0.12	0.13	0.15	0.27	10.46%
Augmented Reality (AR)	0.10	0.13	0.15	0.18	0.46	17.31%
Total	1.46	1.63	1.82	2.03	4.06	12.15%

Image Recognition accounted for the largest market share of 73.11% in 2024, with a market Value of USD 1.19 Million and is projected to grow at a CAGR of 12.48% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .19 Million in 2024; it is projected to grow at a CAGR of 5.42%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 17.31%.



## 8.6.2 SAUDI ARABIA

**FIGURE 52 SAUDI ARABIA MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 77 SAUDI ARABIA PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	1.21	1.36	1.53	1.72	3.59	12.93%
Free Apps	0.41	0.44	0.48	0.52	0.89	9.22%
Paid Apps	0.10	0.12	0.14	0.17	0.47	18.35%
Total	1.72	1.93	2.16	2.42	4.95	12.59%

Freemium Apps accounted for the largest market share of 70.77% in 2024, with a market Value of USD 1.36 Million and is projected to grow at a CAGR of 12.93% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD .44 Million in 2024; it is projected to grow at a CAGR of 9.22%. However, Paid Apps is projected to grow at the highest CAGR of 18.35%.

**TABLE 78 SAUDI ARABIA PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	0.96	1.08	1.22	1.37	2.92	13.33%
Android	0.67	0.75	0.84	0.93	1.85	12.03%
Web-Based	0.09	0.09	0.10	0.11	0.17	7.62%
Total	1.72	1.93	2.16	2.42	4.95	12.59%

iOS accounted for the largest market share of 56.09% in 2024, with a market Value of USD 1.08 Million and is projected to grow at the highest CAGR of 13.33% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD .75 Million in 2024; it is projected to grow at a CAGR of 12.03%.

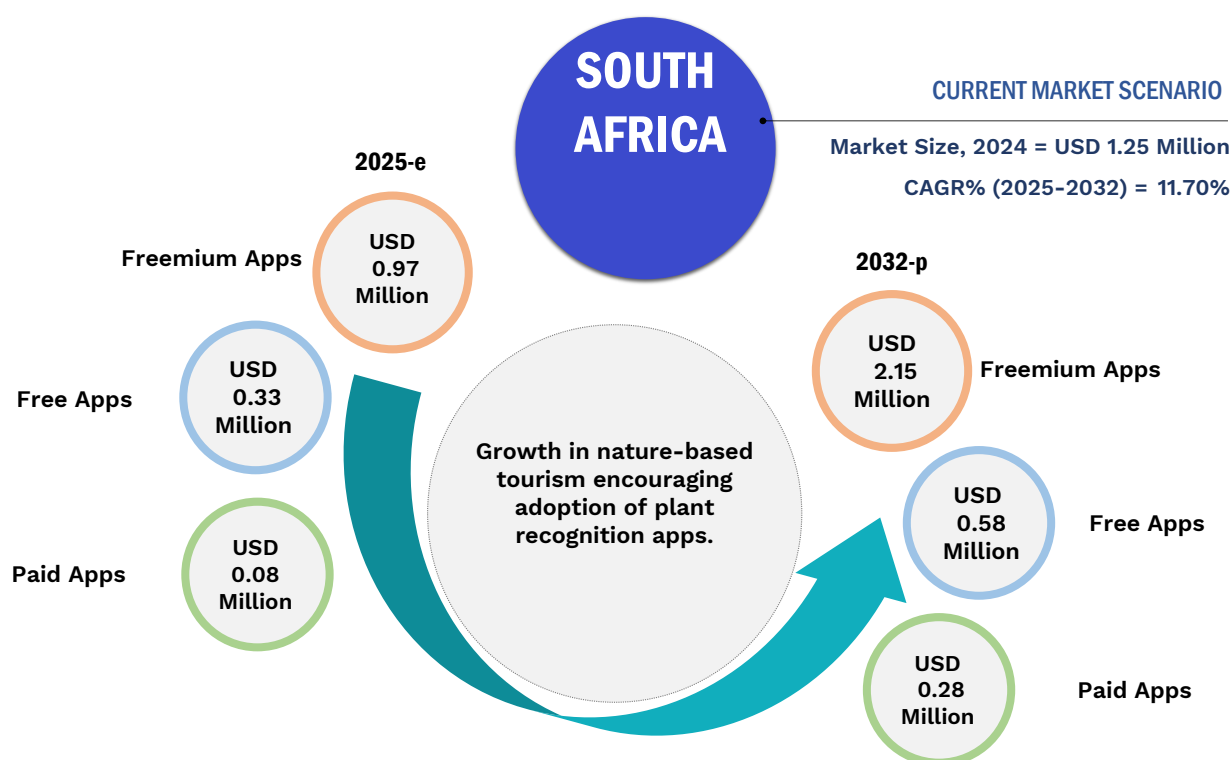
**TABLE 79 SAUDI ARABIA PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	1.27	1.42	1.60	1.80	3.75	12.93%
Text-Based Identification	0.21	0.22	0.23	0.24	0.34	5.84%
Voice Recognition	0.13	0.14	0.15	0.17	0.31	10.91%
Augmented Reality (AR)	0.12	0.14	0.17	0.21	0.54	17.62%
Total	1.72	1.93	2.16	2.42	4.95	12.59%

Image Recognition accounted for the largest market share of 73.96% in 2024, with a market Value of USD 1.42 Million and is projected to grow at a CAGR of 12.93% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .22 Million in 2024; it is projected to grow at a CAGR of 5.84%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 17.62%.

### 8.6.3 SOUTH AFRICA

**FIGURE 53 SOUTH AFRICA MARKET SNAPSHOT**



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 80 SOUTH AFRICA PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)**

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	0.78	0.87	0.97	1.09	2.15	12.03%
Free Apps	0.29	0.31	0.33	0.36	0.58	8.35%
Paid Apps	0.06	0.07	0.08	0.10	0.28	18.47%
Total	1.13	1.25	1.39	1.55	3.01	11.70%

Freemium Apps accounted for the largest market share of 69.79% in 2024, with a market Value of USD .87 Million and is projected to grow at a CAGR of 12.03% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD .31 Million in 2024; it is projected to grow at a CAGR of 8.35%. However, Paid Apps is projected to grow at the highest CAGR of 18.47%.

**TABLE 81 SOUTH AFRICA PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	0.59	0.66	0.74	0.83	1.67	12.42%
Android	0.47	0.52	0.58	0.64	1.21	11.14%
Web-Based	0.06	0.07	0.07	0.08	0.13	8.33%
Total	1.13	1.25	1.39	1.55	3.01	11.70%

iOS accounted for the largest market share of 52.73% in 2024, with a market Value of USD .66 Million and is projected to grow at the highest CAGR of 12.42% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD .52 Million in 2024; it is projected to grow at a CAGR of 11.14%.

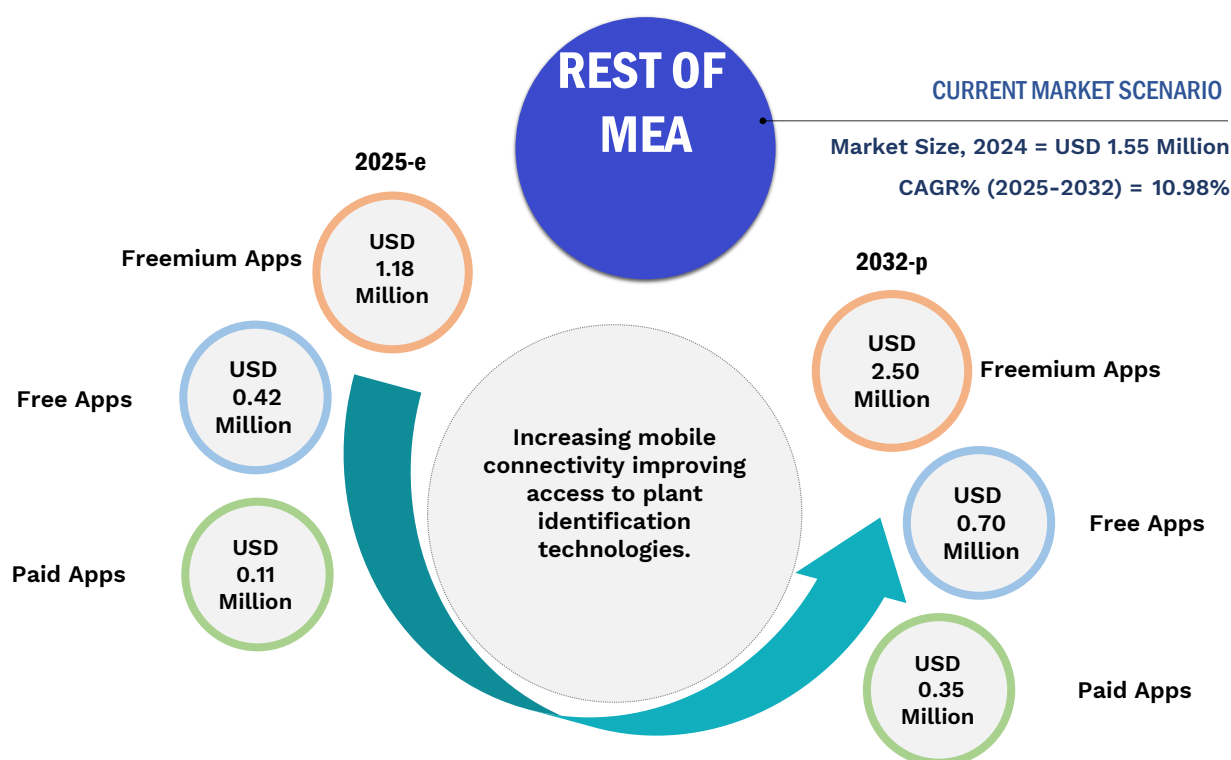
**TABLE 82 SOUTH AFRICA PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	0.81	0.90	1.00	1.12	2.22	12.03%
Text-Based Identification	0.15	0.15	0.16	0.17	0.22	5.00%
Voice Recognition	0.09	0.10	0.10	0.12	0.20	10.02%
Augmented Reality (AR)	0.08	0.10	0.12	0.14	0.36	16.89%
Total	1.13	1.25	1.39	1.55	3.01	11.70%

Image Recognition accounted for the largest market share of 71.98% in 2024, with a market Value of USD .90 Million and is projected to grow at a CAGR of 12.03% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .15 Million in 2024; it is projected to grow at a CAGR of 5.00%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 16.89%.

## 8.6.4 REST OF MIDDLE EAST AND AFRICA

**FIGURE 54** REST OF MIDDLE EAST AND AFRICA MARKET SNAPSHOT



Source: Verified Market Research, e-Estimated & p-Projected

**TABLE 83** REST OF MIDDLE EAST AND AFRICA PLANT IDENTIFICATION APPS MARKET, BY TYPE, 2023-2032 (USD MILLION)

Type	2023	2024	2025	2026	2032	CAGR (2025-2032)
Freemium Apps	0.96	1.07	1.18	1.31	2.50	11.31%
Free Apps	0.37	0.39	0.42	0.45	0.70	7.65%
Paid Apps	0.08	0.10	0.11	0.14	0.35	17.39%
Total	1.41	1.55	1.71	1.90	3.55	10.98%

Freemium Apps accounted for the largest market share of 68.68% in 2024, with a market Value of USD 1.07 Million and is projected to grow at a CAGR of 11.31% during the forecast period. Free Apps was the second-largest market in 2024, Value of USD .39 Million in 2024; it is projected to grow at a CAGR of 7.65%. However, Paid Apps is projected to grow at the highest CAGR of 17.39%.

**TABLE 84 REST OF MIDDLE EAST AND AFRICA PLANT IDENTIFICATION APPS MARKET, BY PLATFORM, 2023-2032 (USD MILLION)**

Platform	2023	2024	2025	2026	2032	CAGR (2025-2032)
iOS	0.73	0.81	0.90	1.00	1.95	11.70%
Android	0.60	0.66	0.73	0.80	1.46	10.43%
Web-Based	0.08	0.08	0.09	0.10	0.15	7.79%
Total	1.41	1.55	1.71	1.90	3.55	10.98%

iOS accounted for the largest market share of 52.01% in 2024, with a market Value of USD .81 Million and is projected to grow at the highest CAGR of 11.70% during the forecast period. Android accounted for the second-largest market in 2024, Value of USD .66 Million in 2024; it is projected to grow at a CAGR of 10.43%.

**TABLE 85 REST OF MIDDLE EAST AND AFRICA PLANT IDENTIFICATION APPS MARKET, BY FUNCTIONALITY, 2023-2032 (USD MILLION)**

Functionality	2023	2024	2025	2026	2032	CAGR (2025-2032)
Image Recognition	0.99	1.10	1.22	1.35	2.58	11.31%
Text-Based Identification	0.19	0.20	0.20	0.21	0.27	4.32%
Voice Recognition	0.11	0.12	0.13	0.15	0.25	9.32%
Augmented Reality (AR)	0.11	0.13	0.16	0.19	0.45	16.18%
Total	1.41	1.55	1.71	1.90	3.55	10.98%

Image Recognition accounted for the largest market share of 70.89% in 2024, with a market Value of USD 1.10 Million and is projected to grow at a CAGR of 11.31% during the forecast period. Text-Based Identification was the second-largest market in 2024, Value of USD .20 Million in 2024; it is projected to grow at a CAGR of 4.32%. However, Augmented Reality (AR) is projected to grow at the highest CAGR of 16.18%.

## 9 COMPETITIVE LANDSCAPE

### 9.1 OVERVIEW

The Global Plant Identification Apps Market is highly fragmented with the presence of a large number of players in the market. Some of the major companies include PlantSnap Inc., PictureThis, Pl@ntNet, LuontoPortti, EarthSnap, iPflanzen, Garden Answers, Appixi (Leafsnap), PlantIn, iNaturalist, Flora Incognita.

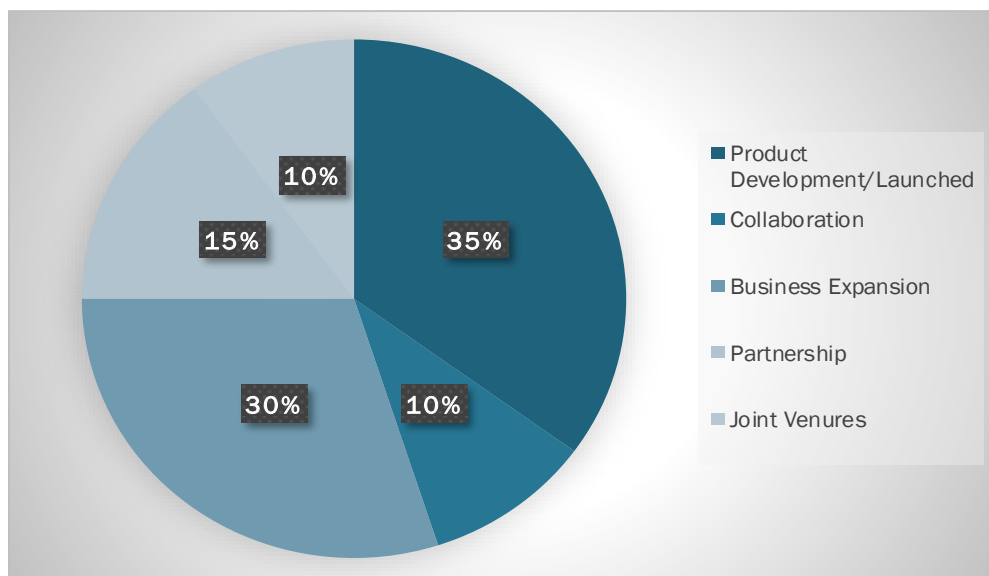
### 9.2 COMPETITIVE SCENARIO

Some of the key development strategies adopted by the major companies in the Global Plant Identification Apps Market include:

- Product Development/ Launch
- Collaboration
- Partnership
- Business Expansion
- Ventures

Following is some of the strategic initiatives adopted by the major players in the market:

**FIGURE 55** KEY STRATEGIC DEVELOPMENTS

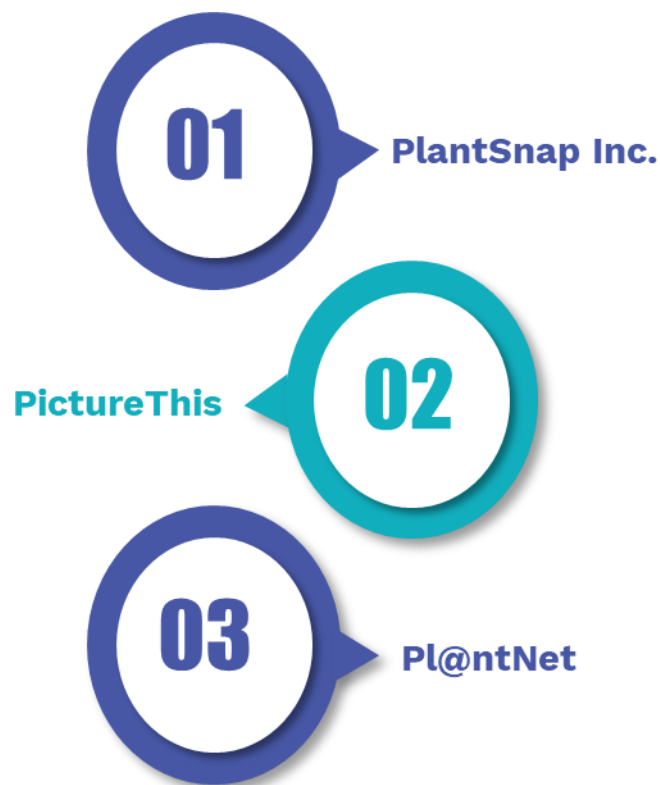


The companies have adopted organic as well as inorganic growth strategies such as new service/product developments, and investments & expansions in order to expand their product portfolio and increase their respective market shares across different regions. Expansion & investments involve investments in R&D, new manufacturing facilities and supply chain optimization.

New Product & Technology developments enable a company to increase its product offerings. Collaborations, Partnerships & Agreements take place between companies, vendors & suppliers to optimize the flow of the supply chain.

### 9.3 COMPANY MARKET RANKING ANALYSIS

FIGURE 56 COMPANY MARKET RANKING ANALYSIS



The parameters that have been considered for the ranking of the above-mentioned companies include the annual revenue, product portfolio, geographic reach, and market penetration.

The product portfolio of the companies is classified in terms of their diversification as well as the number of products/services that are available. The geographic reach and the market penetration are determined considering the penetration of the company's products and services in various geographical regions and industries.



The companies have adopted organic as well as inorganic growth strategies such as new service/product developments, investments, and expansions in order to expand their product portfolio and increase their respective market shares across different regions. Expansion and investments involve investments in R&D, new manufacturing facilities and supply chain optimization.

New Product & Technology developments enable a company to increase its product offerings. Collaborations, partnerships, and agreements take place between companies, vendors, and suppliers to optimize the flow of the supply chain.

## 9.4 COMPANY REGIONAL FOOTPRINT

**TABLE 86 COMPANY REGIONAL FOOTPRINT**

Company	North America	Europe	Asia-Pacific	Latin America	Middle East and Africa
PlantSnap Inc.	Y	Y	Y	Y	Y
PictureThis	Y	Y	Y	Y	Y
Pl@ntNet	Y	Y	Y	Y	Y
LuontoPortti	Y	Y	Y	Y	Y
iPflanzen	Y	Y	Y	Y	Y
Garden Answers	Y	Y	Y	Y	Y
Appixi (Leafsnap)	Y	Y	Y	Y	Y
EarthSnap	Y	Y	Y	Y	Y
PlantIn	Y	Y	Y	Y	Y
iNaturalist	Y	Y	Y	Y	Y
Flora Incognita	Y	Y	Y	Y	Y

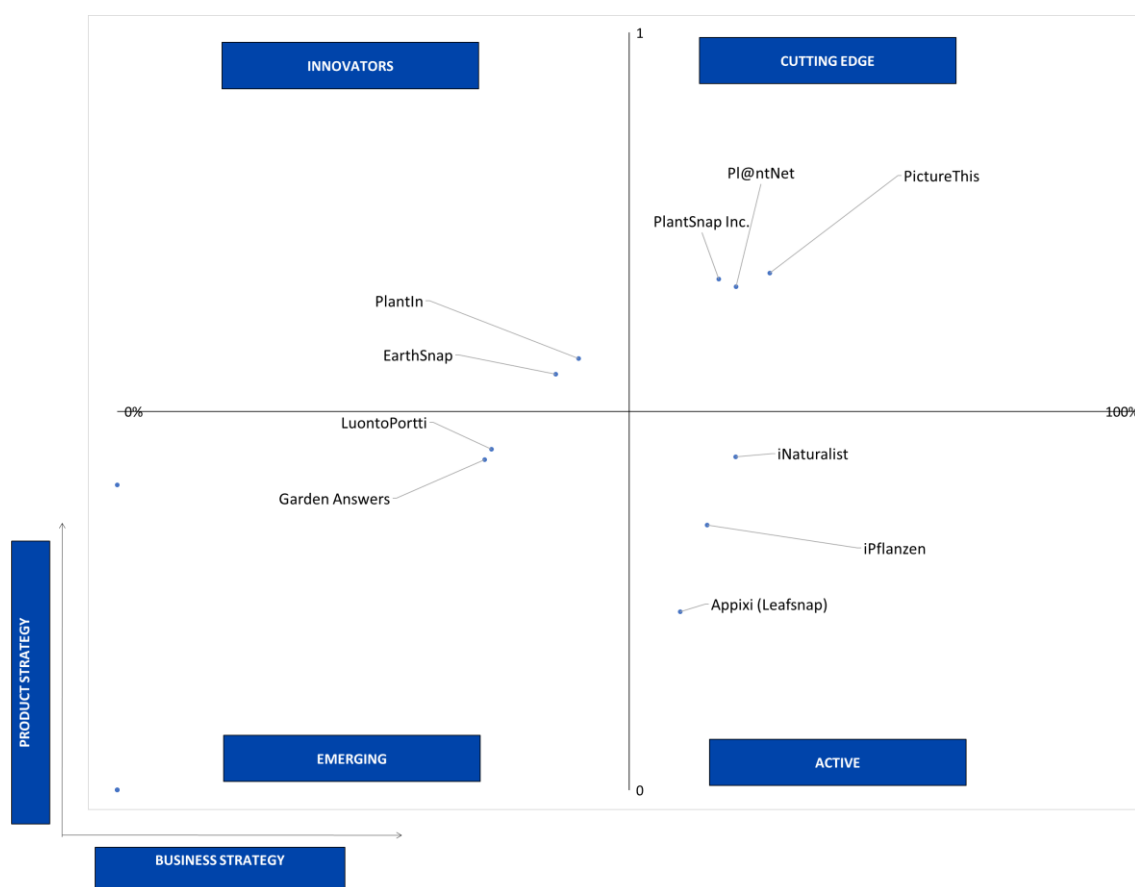
## 9.5 COMPANY INDUSTRY FOOTPRINT

**TABLE 87** COMPANY INDUSTRY FOOTPRINT

Company	iOS	Android	Others
<b>PlantSnap Inc.</b>	Y	Y	Y
<b>PictureThis</b>	Y	Y	Y
<b>Pl@ntNet</b>	Y	Y	Y
<b>LuontoPortti</b>	Y	Y	Y
<b>iPflanzen</b>	Y	Y	Y
<b>Garden Answers</b>	Y	Y	Y
<b>Appixi (Leafsnap)</b>	Y	Y	Y
<b>EarthSnap</b>	Y	Y	Y
<b>PlantIn</b>	Y	Y	Y
<b>iNaturalist</b>	Y	Y	Y
<b>Flora Incognita</b>	Y	Y	Y

## 9.6 ACE MATRIX

FIGURE 57 ACE MATRIC



This section of the report provides an overview of the company evaluation scenario in the Global Plant Identification Apps Market. The company evaluation has been carried out based on the outcomes of the qualitative and quantitative analyses of various factors such as product portfolios, technological innovations, market presence, revenues of companies, and the opinions of primary respondents.

### 9.6.1 ACTIVE

They are established vendors with powerful business strategies. However, they do not have strong service/product/solution portfolios. They generally focus on their geographic reach related to the product/service offered. The companies falling under the Active category include iPflanzen, Appixi (Leafsnap), iNaturalist, Flora Incognita.

### 9.6.2 CUTTING EDGE

Vendors that fall in this category generally receive high scores for most evaluation criteria. These players have established service/product portfolios as well as a powerful market presence. They also devise effective business strategies. The companies falling under the cutting-edge category include PlantSnap Inc., PictureThis, Pl@ntNet

### 9.6.3 EMERGING

They are vendors who have started gaining momentum in the market with their niche product offerings. They do not pursue many strong business strategies compared to other established vendors. They might be new entrants in the market and would require some more time before gaining traction in the market. Companies falling under the emerging category include LuontoPortti, Garden Answers.

### 9.6.4 INNOVATORS

Innovators are vendors that have demonstrated substantial service innovation compared with their competitors. They have highly focused service portfolios. However, they lack strong growth strategies for their overall businesses. The companies falling under the emerging innovators category include EarthSnap, PlantIn.

## 10 COMPANY PROFILES

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### 10.1 PLANTSAP INC.

#### 10.1.1 COMPANY OVERVIEW

PlantSnap Inc. is a pioneering technology company dedicated to making plant identification effortless through the power of artificial intelligence and machine learning. The idea for PlantSnap was born in 2012 when the company's founder encountered an unfamiliar plant in a friend's backyard but couldn't identify it. This simple curiosity sparked a larger mission—to create an innovative tool that would allow anyone, anywhere, to instantly recognize plants, flowers, and trees with just a smartphone.

Since its inception, PlantSnap has grown into one of the most comprehensive plant identification platforms available. The app boasts a vast database of over 650,000 plant species and has collected more than 475 million images to refine its AI-powered recognition system. By leveraging advanced machine learning algorithms, PlantSnap enables users to identify plants in real time by simply taking a photo, making it a valuable tool for gardeners, botanists, educators, and nature enthusiasts worldwide.

Beyond identification, PlantSnap serves as a global plant education and conservation tool. The app provides detailed information on each plant, including its scientific name, habitat, and care instructions. Additionally, it supports citizen science initiatives by allowing users to contribute their plant discoveries to a broader network, helping to expand botanical knowledge and promote biodiversity conservation efforts.

#### 10.1.2 COMPANY INSIGHTS

FIGURE 58 PLANTSAP INC.: COMPANY INSIGHT

COMPANY AT A GLANCE - 2024	
Founded:	2012
Headquarter:	Denver, United States
Employees:	NA
Revenue:	USD 10 Million
Ownership:	Private

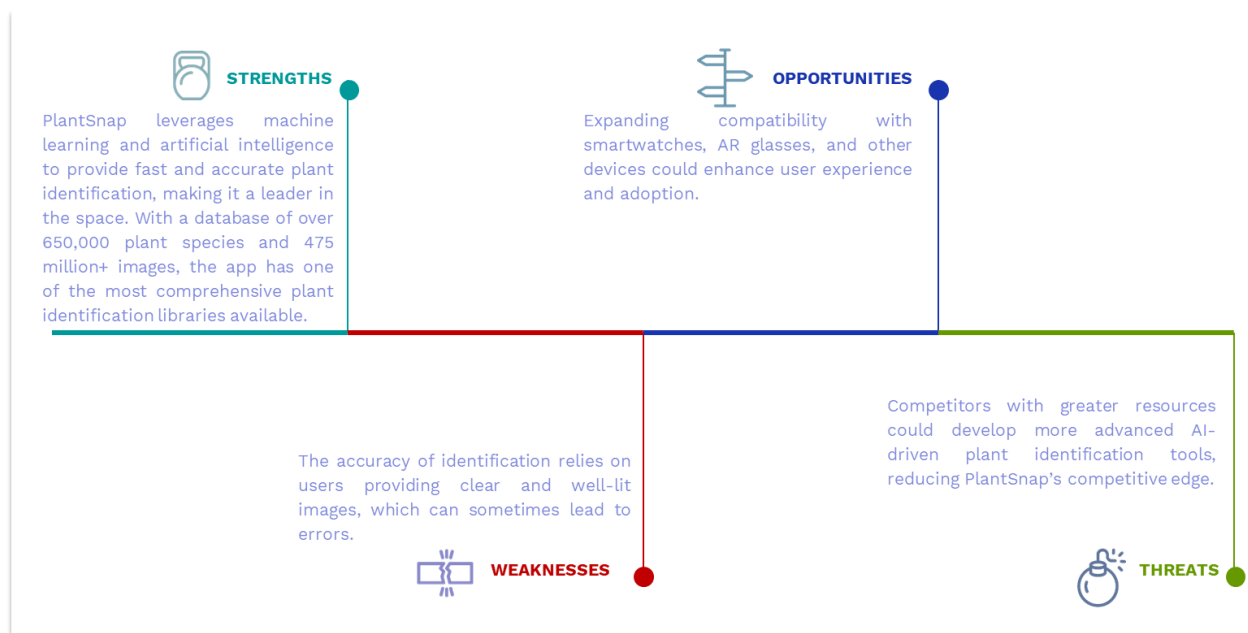
### 10.1.3 PRODUCT BENCHMARKING

**TABLE 88 PLANTSAP INC.: PRODUCT BENCHMARKING**

Products	Application
PlantSnap app	<ul style="list-style-type: none"> <li>Company Offers PlantSnap app as its plant identification application.</li> <li>The app uses artificial intelligence and machine learning to identify plants, flowers, trees, succulents, and mushrooms from photos taken by users.</li> <li>It features a vast database with over 650,000 plant species and more than 475 million images, making it a powerful tool for plant enthusiasts, gardeners, and researchers worldwide.</li> </ul>

### 10.1.4 SWOT ANALYSIS

**FIGURE 59 PLANTSAP INC.: SWOT ANALYSIS**



## 10.1.5 WINNING IMPERATIVES

**TABLE 89 PLANTSAP INC.: WINNING IMPERATIVES**

	Product	Regional Focus	Growth Strategy
CORE STRENGTH	Continuous Innovation in AI & Machine Learning  Strengthen & Expand the Plant Database	<ul style="list-style-type: none"> <li>• North America</li> <li>• Asia pacific</li> <li>• Europe</li> <li>• Africa</li> <li>• Middle East</li> <li>• Latin America</li> </ul>	<ul style="list-style-type: none"> <li>• Innovation</li> <li>• Global Expansion &amp; Localization</li> <li>• User Engagement &amp; Community Development</li> </ul>
OPPORTUNITY AREA	Investing in new technologies  Sustainability & Conservation Initiatives	<ul style="list-style-type: none"> <li>• Middle East</li> <li>• Latin America</li> </ul>	<ul style="list-style-type: none"> <li>• Data Privacy &amp; Compliance</li> <li>• Integration with Emerging Technologies</li> </ul>

## 10.1.6 CURRENT FOCUS & STRATEGIES

PlantSnap Inc. is currently focused on enhancing its AI-driven plant identification technology, expanding its global plant database, and improving user engagement through community-driven features. The company is investing in machine learning improvements to increase identification accuracy and developing offline capabilities to make the app accessible in remote areas. Additionally, PlantSnap is pursuing strategic partnerships with botanical institutions, educational organizations, and environmental groups to strengthen its plant data and conservation efforts.

## 10.1.7 THREAT FROM COMPETITION

PlantSnap Inc. faces strong competition from AI-powered plant identification apps like Pl@ntNet, LeafSnap, etc., which offer similar or improved accuracy, user experience, and community-driven data. Additionally, freemium and open-source platforms such as Pl@ntNet attract users who prefer cost-free, collaborative solutions, making it challenging for PlantSnap to convert users to its premium model.

## 10.2 PICTURETHIS

### 10.2.1 COMPANY OVERVIEW

PictureThis is an innovative mobile application that leverages artificial intelligence to assist users in identifying and caring for plants. By simply snapping a photo, users can instantly recognize flowers, leaves, trees, herbs, and more, making plant identification both accessible and engaging. Beyond identification, the app offers personalized gardening tips, empowering users to enhance their plant care skills and fostering a deeper connection with nature.

Founded in 2015, PictureThis has experienced significant growth, amassing over 100 million users globally. Collectively, these users have identified more than one billion plants, highlighting the app's widespread appeal and utility. The platform's success can be attributed to its user-friendly interface and the integration of advanced AI models, which have been continually optimized to improve accuracy and user experience.

The app's core features include instant plant identification with a reported accuracy rate of 98%, a plant disease auto-diagnose tool that provides treatment advice, and comprehensive plant care guides. Additionally, users can set reminders for essential plant care tasks such as watering, fertilizing, and cleaning. These functionalities cater to both novice and experienced gardeners, making plant care more manageable and informed.

PictureThis operates on a freemium model, offering basic services at no cost while providing premium features through a subscription plan. The premium subscription, priced at \$29.99 per year, grants users unlimited identification scans, in-depth plant care guides, and round-the-clock access to a team of trained botanists. This model ensures that users seeking more comprehensive support and resources can access them conveniently.



## 10.2.2 COMPANY INSIGHTS

**FIGURE 60** PICTURETHIS: COMPANY INSIGHT

COMPANY AT A GLANCE - 2024	
Founded:	2015
Headquarter:	Hong Kong
Employees:	NA
Revenue:	NA
Ownership:	Private

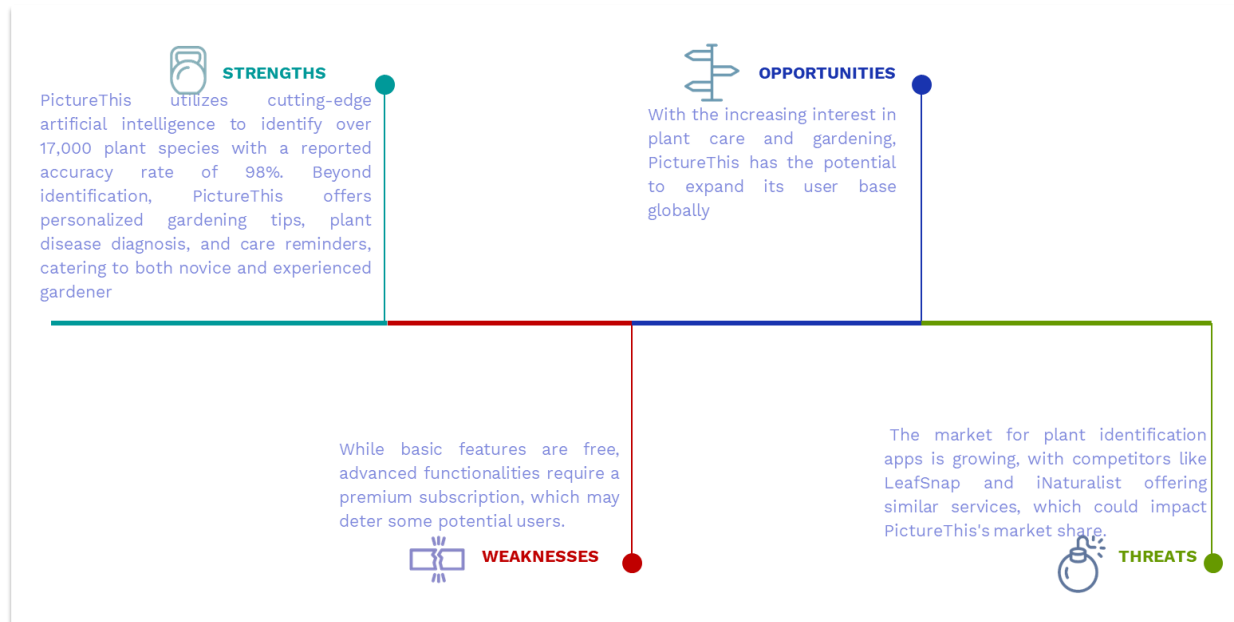
## 10.2.3 PRODUCT BENCHMARKING

**TABLE 90** PICTURETHIS: PRODUCT BENCHMARKING

Products	Application
PictureThis	<ul style="list-style-type: none"> <li>• Features:</li> <li>• Identifies over 10,000 plant species with high accuracy</li> <li>• Diagnoses plant diseases and offers treatment suggestions</li> <li>• Provides personalized plant care tips</li> <li>• User-friendly and visually appealing with strong AI recognition.</li> </ul>

## 10.2.4 SWOT ANALYSIS

**FIGURE 61** PICTURETHIS: SWOT ANALYSIS



## 10.2.5 WINNING IMPERATIVES

**TABLE 91** PICTURETHIS: WINNING IMPERATIVES

	Product	Regional Focus	Growth Strategy
CORE STRENGTH	<ul style="list-style-type: none"> <li>Enhance AI Accuracy &amp; Speed</li> <li>Expand Database &amp; Regional Adaptation</li> </ul>	<ul style="list-style-type: none"> <li>North America</li> <li>Latin America</li> <li>Europe</li> <li>Asia pacific</li> <li>Africa</li> <li>Middle East</li> </ul>	<ul style="list-style-type: none"> <li>Technological Innovation</li> <li>Increase Global Reach &amp; Accessibility</li> </ul>
OPPORTUNITY AREA	<ul style="list-style-type: none"> <li>Competitive Differentiation</li> <li>Leverage Social Media &amp; Digital Trends</li> </ul>	<ul style="list-style-type: none"> <li>Africa</li> </ul>	<ul style="list-style-type: none"> <li>Diverse product portfolio</li> <li>Integrate with Smart Gardening Solutions</li> </ul>

## 10.2.6 CURRENT FOCUS & STRATEGIES

PictureThis is currently focused on enhancing its AI-powered plant identification capabilities while expanding its global user base. The company is continuously refining its machine learning algorithms to improve identification accuracy and expand its database of plant species. A key strategy includes strengthening its freemium model, offering free plant identification while encouraging users to subscribe for premium features like advanced plant care tips and expert consultations.

## 10.2.7 THREAT FROM COMPETITION

PictureThis faces strong competition from other plant identification apps like iNaturalist, LeafSnap, and Flora Incognita, which offer similar AI-driven plant recognition features, often for free or with open-source models. iNaturalist, backed by the California Academy of Sciences and National Geographic, has a strong scientific community contributing to its database, making it a preferred choice for researchers and conservationists. Flora Incognita, developed by European research institutions, provides high-accuracy plant identification without requiring a paid subscription, posing a challenge to PictureThis's freemium model.

## 10.3 PL@NTNET

### 10.3.1 COMPANY OVERVIEW

Pl@ntNet is a citizen science initiative that leverages artificial intelligence to facilitate plant identification through user-contributed photographs. Established in 2009, the project is a collaborative effort among French research institutions, including the Institut de recherche pour le développement (IRD), Centre de coopération internationale en recherche agronomique pour le développement (CIRAD), Institut national de la recherche agronomique (INRA), Institut national de recherche en informatique et en automatique (INRIA), and the Tela Botanica network, with support from Agropolis Fondation.

The platform's primary offering is a mobile application, launched in 2013, that allows users to identify plant species by uploading photographs. Utilizing machine learning algorithms, the app analyzes visual features of the images to suggest possible species matches. As of 2019, Pl@ntNet had been downloaded over 10 million times across more than 180 countries, reflecting its global reach and popularity among both amateur and professional botanists. In 2020, Pl@ntNet's contributions to biodiversity data were recognized when it became a significant provider to the Global Biodiversity Information Facility (GBIF), integrating millions of plant observations into this international database. This integration has enhanced the accessibility of plant biodiversity data for scientific research and conservation efforts worldwide.

### 10.3.2 COMPANY INSIGHTS

FIGURE 62 PL@NTNET: COMPANY INSIGHT

COMPANY AT A GLANCE - 2024	
Founded:	2009
Headquarter:	Montpellier, France
Employees:	NA
Revenue:	NA
Ownership:	Private
.	

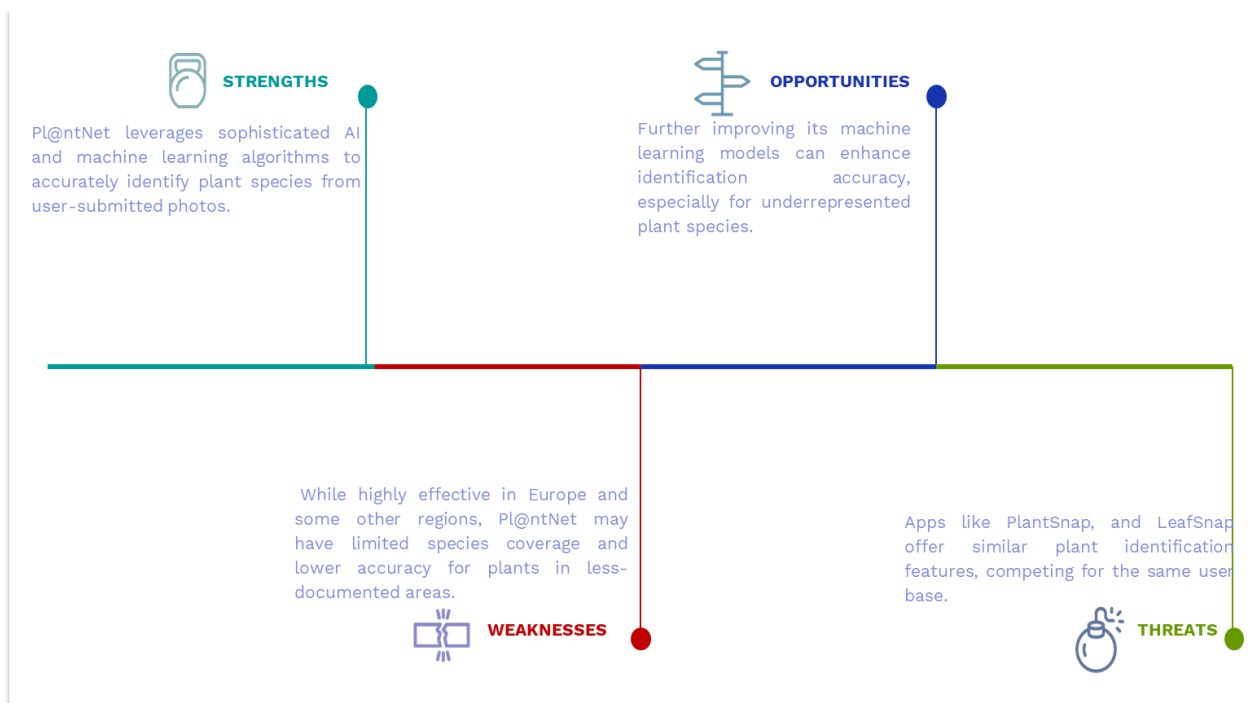
### 10.3.3 PRODUCT BENCHMARKING

**TABLE 92 PL@NTNET: PRODUCT BENCHMARKING**

Products	Application
Pl@ntNet app	<ul style="list-style-type: none"> <li>Pl@ntNet offers a comprehensive plant identification application designed to assist users in recognizing various plant species through photographs.</li> <li>The application enables users to identify plants by simply photographing them with their smartphones. By analyzing visual features of the uploaded images, Pl@ntNet provides possible species matches, making plant identification both intuitive and efficient</li> </ul>

### 10.3.4 SWOT ANALYSIS

**FIGURE 63 PL@NTNET: SWOT ANALYSIS**



### 10.3.5 WINNING IMPERATIVES

**TABLE 93 PL@NTNET: WINNING IMPERATIVES**

	Product	Regional Focus	Growth Strategy
CORE STRENGTH	<ul style="list-style-type: none"> <li>Enhancing AI and Machine Learning Accuracy</li> <li>Strengthening Community Engagement</li> </ul>	<ul style="list-style-type: none"> <li>North America</li> <li>Latin America</li> <li>Europe</li> <li>Asia Pacific</li> <li>Middle East and Africa</li> </ul>	<ul style="list-style-type: none"> <li>Deepening Scientific and Educational Collaborations</li> <li>Building Partnerships with Conservation Initiatives</li> </ul>
OPPORTUNITY AREA	<ul style="list-style-type: none"> <li>Expanding Database Coverage</li> <li>Improving User Experience &amp; Features</li> </ul>	<ul style="list-style-type: none"> <li>Middle East</li> </ul>	<ul style="list-style-type: none"> <li>Expanding Global Reach &amp; Language Support</li> </ul>

### 10.3.6 CURRENT FOCUS & STRATEGIES

Pl@ntNet's current focus is on enhancing its AI-powered plant identification capabilities by expanding its database and improving algorithm accuracy. The platform prioritizes user engagement by encouraging citizen science contributions and collaborating with botanical institutions to ensure data reliability. It is also working on increasing accessibility by supporting more languages and integrating offline identification features for users in remote areas.

### 10.3.7 THREAT FROM COMPETITION

Pl@ntNet faces significant competition from other plant identification apps like PlantSnap, LeafSnap, and EarthSnap, which also leverage AI and machine learning for species recognition. These competitors offer similar functionalities, sometimes with larger databases, offline capabilities, or commercial partnerships that enhance user adoption.

## 10.4 EARTHSNAP

### 10.4.1 COMPANY OVERVIEW

EarthSnap, dedicated to enhancing the connection between individuals and the natural world through innovative applications. The company's flagship product, the EarthSnap app, utilizes advanced artificial intelligence to enable users to identify over two million species of plants and animals by simply capturing photos with their mobile devices. This functionality encourages users to explore, learn about, and document the biodiversity around them. The inception of EarthSnap stems from the vision of Eric Ralls, the founder and CEO of Earth.com. Prior to EarthSnap, Ralls developed PlantSnap in 2017, an app focused on plant identification that quickly gained popularity, amassing over 25 million downloads by 2021. Building upon this success, Ralls launched EarthSnap to provide a more comprehensive tool that includes identification capabilities for animals, bugs, birds, and more, thereby broadening the scope of nature engagement for users.

A distinctive feature of EarthSnap is its integration with Earth.com's extensive database, Earthpedia, which contains detailed information on millions of species. Users can access this encyclopedia to learn about the habitat, global population distribution, and history of various species. Additionally, the app fosters a global community through EarthChat, a platform where nature enthusiasts can share their discoveries, engage in discussions, and promote environmental causes.

Available for free on both the Apple App Store and Google Play Store, EarthSnap offers additional premium features through subscription tiers. The app has garnered positive feedback for its user-friendly interface and educational value, positioning EarthSnap, Inc. as a leader in leveraging technology to promote environmental awareness and appreciation.

## 10.4.2 COMPANY INSIGHTS

**FIGURE 64** EARTHSNAP: COMPANY INSIGHT

COMPANY AT A GLANCE - 2024	
Founded:	2016
Headquarter:	Telluride, United States
Employees:	NA
Revenue:	USD 5.2 Million
Ownership:	Private

## 10.4.3 PRODUCT BENCHMARKING

**TABLE 94** EARTHSNAP: PRODUCT BENCHMARKING

Products	Application
EarthSnap App	<ul style="list-style-type: none"> <li>Earth.com offers EarthSnap as its plant identification app.</li> <li>EarthSnap is a first-of-its-kind mobile application that allows users to identify plant and animal species using their smartphone camera. The app promotes citizen science by encouraging users to explore, learn, and document the natural world around them.</li> <li>It is designed to provide accurate species identification, making it a valuable tool for nature enthusiasts, researchers, and conservationists.</li> </ul>



## 10.5 LUONTOPORTTI

### 10.5.1 COMPANY OVERVIEW

LuontoPortti, known internationally as NatureGate, is a Finnish company dedicated to enhancing public knowledge and appreciation of natural biodiversity. Established in 2007 by Eija and Jouko Lehmuskallio, the company has its roots in the founders' extensive work in nature documentation and the development of identification services dating back to the 1990s. Their passion for nature led to the creation of materials used in television series and publications, culminating in the formation of the NatureGate research working group in 2006 at the University of Helsinki's Department of Teacher Education, under the leadership of Professor Mauri Åhlberg.

LUONTOPORTTI.COM

The company's primary offering is its comprehensive online platform, LuontoPortti.com, which serves as an accessible resource for identifying various species found in nature. Users can explore detailed information on over a thousand plant species, common birds in Finland, mushrooms, and more. The platform features high-quality photographs from leading photographers and unique identification tools that make recognizing unfamiliar species both easy and engaging. Additionally, users can listen to bird songs directly on the site, enriching the interactive experience.

### 10.5.2 COMPANY INSIGHTS

FIGURE 65 LUONTOPORTTI: COMPANY INSIGHT

COMPANY AT A GLANCE - 2024	
Founded:	2007
Headquarter:	Helsinki, Finland
Employees:	NA
Revenue:	NA
Ownership:	Private

### 10.5.3 PRODUCT BENCHMARKING

**TABLE 95 LUONTOPORTTI: PRODUCT BENCHMARKING**

Products/Services	Application
NatureGate app	<ul style="list-style-type: none"> <li>NatureGate offers a plant identification application designed to assist users in recognizing various plant species.</li> <li>The NatureGate app enables users to identify plants by selecting specific characteristics such as height, flower color, or leaf shape.</li> </ul>

## 10.6 IPFLANZEN

### 10.6.1 COMPANY OVERVIEW

iPflanzen is a specialized mobile application developed by Andreas Garzotto GmbH, designed to facilitate the identification of plants commonly found in gardens, parks, forests, and homes. The app offers users the ability to identify approximately 1,500 plant species through a user-friendly identification key that considers various plant characteristics such as leaf shape, leaf edge, flower color, and fruit color. This methodical approach allows users to accurately determine plant species based on observable traits. Unlike many plant identification apps that rely on image recognition technology, iPflanzen requires users to input specific details about the plant's features. By entering information such as leaf shape, flower structure, and color, the app narrows down potential matches, providing a list of possible species accompanied by images, common names, and scientific names. This detailed input method encourages users to engage more deeply with plant morphology, enhancing their botanical knowledge.

iPflanzen serves as a complementary tool within a suite of applications developed by Andreas Garzotto GmbH. It seamlessly integrates with other apps like iGarten and iForest, allowing users to access more comprehensive information about garden plants, trees, and shrubs. This interconnected ecosystem provides users with a holistic resource for plant identification and information, catering to both amateur gardeners and professional botanists.

### 10.6.2 COMPANY INSIGHTS

FIGURE 66 IPFLANZEN: COMPANY INSIGHT

COMPANY AT A GLANCE - 2024	
Founded:	NA
Headquarter:	Dürnten, Switzerland
Employees:	NA
Revenue:	NA
Ownership:	Private

### 10.6.3 PRODUCT BENCHMARKING

**TABLE 96 IPFLANZEN: PRODUCT BENCHMARKING**

Products	Application
iPflanzen	<ul style="list-style-type: none"> <li>• Accurately identify plants from the garden, park, forest or home</li> <li>• Approximately 1500 plants are available for identification. Selections are shown with an image, common and scientific name</li> <li>• Also access more information by switching from iPflanzen directly to iForest or iGarten, provided that those applications are installed on your device</li> <li>• Together these three applications are an ideal tool for identifying, selecting, and learning about a wide range of plants.</li> </ul>

## 10.7 GARDEN ANSWERS

### 10.7.1 COMPANY OVERVIEW

Garden Answers is a division of Garden Answers LLC, a technology-driven company based in Greendale, Indiana. Specializing in advanced plant identification solutions, the company has developed a highly intuitive mobile application that helps users recognize plants quickly and accurately. By leveraging cutting-edge image recognition technology, Garden Answers empowers gardeners, horticulture enthusiasts, and nature lovers with instant access to plant details, making plant care and identification more accessible than ever. Beyond its innovative technology, Garden Answers has built a strong community of gardening experts who provide users with valuable insights, advice, and guidance. The platform serves as an interactive hub where individuals can ask plant-related questions and receive expert-backed answers, fostering a collaborative environment for plant care and education. This expert-driven approach enhances the user experience by combining artificial intelligence with human expertise.

The company's flagship mobile application allows users to identify plants simply by taking a photo with their smartphone. The app then matches the image with its extensive database and provides detailed information about the plant's species, characteristics, and care requirements. Additionally, users can engage with gardening professionals for personalized recommendations, making the app a comprehensive tool for plant identification and maintenance.

### 10.7.2 COMPANY INSIGHTS

FIGURE 67 GARDEN ANSWERS: COMPANY INSIGHT

COMPANY AT A GLANCE - 2024	
Founded:	2014
Headquarter:	Greendale, Indiana
Employees:	NA
Revenue:	NA
Ownership:	Private

### 10.7.3 PRODUCT BENCHMARKING

**TABLE 97 GARDEN ANSWERS: PRODUCT BENCHMARKING**

Products	Application
Garden Answers	<ul style="list-style-type: none"> <li>• Features</li> <li>• Plant Identification</li> <li>• Point and click your mobile phone or tablet at any plant and get instant identification</li> <li>• Instantly identify virtually any plant</li> <li>• Pests And Diseases</li> <li>• At the tap of a button, you can find out if your plant has a disease or pest infestation problem</li> <li>• If you think your plant has a disease or pest problem, now you'll know.</li> <li>• Get Expert Advice</li> <li>• Ask gardening experts for advice &amp; recommendations about virtually any plant you choose.</li> <li>• Now you can get expert advice for your plant questions</li> </ul>

## 10.8 APPIXI (LEAFSNAP)

### 10.8.1 COMPANY OVERVIEW

LeafSnap is an innovative mobile application developed collaboratively by researchers from Columbia University, the University of Maryland, and the Smithsonian Institution. The app utilizes advanced visual recognition software to help users identify tree species by analyzing photographs of their leaves. Appixi is a technology company specializing in the development of mobile applications and games that cater to a diverse user base. With a focus on creating user-friendly and engaging digital products, Appixi has established itself in the mobile app industry by offering a variety of applications that blend functionality with entertainment.

LeafSnap – Plant Identification, an application designed to help users identify plants effortlessly. By simply taking a photograph of a plant, users can quickly receive information about the species, making it a valuable tool for gardening enthusiasts, students, and nature lovers. The app emphasizes ease of use, security, and reliable customer support, reflecting Appixi's commitment to quality.

In addition to LeafSnap, Appixi has developed other applications such as Block Puzzle: Pirate Adventure, a game that combines classic block puzzle mechanics with an adventurous pirate theme, and SleepSounds – Relax Melodies, an app offering a collection of soothing sounds aimed at improving sleep quality and relaxation. These diverse offerings demonstrate Appixi's versatility in addressing various user needs, from entertainment to wellness.

### 10.8.2 COMPANY INSIGHTS

FIGURE 68 APPIXI: COMPANY INSIGHT

COMPANY AT A GLANCE - 2024	
Founded:	2005
Headquarter:	Wyoming, United States
Employees:	NA
Revenue:	NA
Ownership:	Private

### 10.8.3 PRODUCT BENCHMARKING

**TABLE 98** APPIXI: PRODUCT BENCHMARKING

Products	Application
LeafSnap	<ul style="list-style-type: none"> <li>LeafSnap – Plant Identification is an app created to simplify plant recognition.</li> <li>By capturing a photo of a plant, users can swiftly access details about its species, making it an invaluable resource for gardening enthusiasts, students, and nature lovers.</li> </ul>



## 10.9 PLANTIN

### 10.9.1 COMPANY OVERVIEW

PlantIn, established in 2020 and based in Nicosia, Cyprus, is a leading digital platform dedicated to assisting plant enthusiasts with comprehensive plant care solutions. The company's flagship product, the PlantIn app, offers users personalized guidance on plant identification, health diagnostics, and maintenance routines, leveraging advanced artificial intelligence and machine learning technologies.

The app's core features include a plant identifier capable of recognizing over 17,000 plant species with a 95.8% accuracy rate, a plant health assessment tool that diagnoses potential diseases or issues, and customized care plans tailored to each plant's specific needs. Additionally, PlantIn provides a watering calculator, light meter add-on, and a daily gardening routine organizer to enhance the user experience. For more complex inquiries, users can access the "Ask the Botanist" feature to receive expert advice from professional botanists.

PlantIn operates on a freemium model, offering basic features for free while providing premium plans that unlock additional functionalities. As of February 2025, the app has garnered a substantial user base, with more than 22 million monthly users globally. It has achieved top rankings in the "Education" category on both the App Store and Google Play, reflecting its widespread popularity and user satisfaction.

### 10.9.2 COMPANY INSIGHTS

FIGURE 69 PLANTIN: COMPANY INSIGHT

COMPANY AT A GLANCE - 2024	
Founded:	2020
Headquarter:	Nicosia, Cyprus
Employees:	NA
Revenue:	NA
Ownership:	Private

### 10.9.3 PRODUCT BENCHMARKING

**TABLE 99 PLANTIN: PRODUCT BENCHMARKING**

Products	Application
PlantIn	<ul style="list-style-type: none"> <li>• Users can take a photo of a plant, and the app identifies it from a database of over 17,000 species with 95.8% accuracy.</li> <li>• Provides scientific names, common names, and essential details about the identified plant.</li> <li>• Disease Detection – Identifies plant diseases or issues by analyzing uploaded photos.</li> <li>• Care Recommendations – Offers solutions and treatment options for sick or damaged plants.</li> </ul>

## 10.10 INATURALIST

### 10.10.1 COMPANY OVERVIEW

iNaturalist is a prominent American 501(c)(3) nonprofit organization that serves as a global social network for naturalists, citizen scientists, and biologists. Its primary mission is to connect people to nature and advance biodiversity science and conservation. The platform enables users to map and share observations of biodiversity worldwide, fostering a collaborative environment for learning about nature.

Founded in 2008 as a master's final project at the University of California, Berkeley's School of Information by Nate Agrin, Jessica Kline, and Ken-ichi Ueda, iNaturalist has evolved significantly over the years. Ken-ichi Ueda continued to develop the platform alongside web developer Sean McGregor. In 2011, Ueda partnered with Scott Loarie, a research fellow at Stanford University and lecturer at UC Berkeley, who now co-directs iNaturalist.

iNaturalist offers a platform where users can record and share their observations of various organisms, receive assistance with species identification, and engage with a community passionate about exploring and documenting biodiversity. The platform is accessible via its website and mobile applications, making it convenient for users to contribute data from anywhere. As of December 25, 2024, iNaturalist users have contributed approximately 222 million observations of plants, animals, fungi, and other organisms worldwide, with around 290,000 users active in the preceding 30 days.

### 10.10.2 COMPANY INSIGHTS

FIGURE 70 INATURALIST: COMPANY INSIGHT

COMPANY AT A GLANCE - 2024	
Founded:	2008
Headquarter:	San Rafael, California
Employees:	NA
Revenue:	NA
Ownership:	Private

### 10.10.3 PRODUCT BENCHMARKING

**TABLE 100 INATURALIST: PRODUCT BENCHMARKING**

Products	Application
iNaturalist	<ul style="list-style-type: none"> <li>• Features</li> <li>• AI-assisted species identification using community-verified data</li> <li>• Allows users to upload observations and receive expert feedback</li> <li>• Contributes to scientific biodiversity research</li> <li>• Massive global database with over 150 million recorded observations.</li> </ul>

## 10.11 FLORA INCOGNITA

### 10.11.1 COMPANY OVERVIEW

Flora Incognita is an innovative mobile application designed to facilitate the automatic identification of over 16,000 vascular plant species. Developed collaboratively by scientists from the Technical University of Ilmenau and the Max Planck Institute for Biogeochemistry, the app leverages advanced machine learning techniques to analyze user-submitted photographs, providing rapid and accurate plant identifications.

Launched in 2018, Flora Incognita has experienced significant growth in user engagement. By 2019, the app had been installed over 2 million times, and as of 2022, it surpassed 5 million downloads. Users have contributed to more than 300,000 daily identification requests, reflecting the app's widespread adoption and utility among both amateur and professional botanists.

The app's user-friendly interface allows individuals to photograph plants using their smartphones or tablets, after which the AI-driven system identifies the species within seconds. Each identified plant is accompanied by a detailed fact sheet, offering information on characteristics, protection status, and distribution. Notably, Flora Incognita is free of charge, devoid of advertisements, and functional without a constant internet connection, making it an ideal tool for educational purposes and nature conservation initiatives.

Beyond individual use, Flora Incognita contributes to scientific research through its citizen science approach. Users can save their plant observations, aiding in the monitoring of biodiversity and the effects of climate change on plant life. The aggregated data from user observations provide valuable insights into plant distribution and ecological patterns, supporting conservation efforts and environmental studies.

## 10.11.2 COMPANY INSIGHTS

FIGURE 71 FLORA INCOGNITA: COMPANY INSIGHT

COMPANY AT A GLANCE - 2024	
Founded:	2018
Headquarter:	Ilmenau, Germany
Employees:	NA
Revenue:	NA
Ownership:	Private

## 10.11.3 PRODUCT BENCHMARKING

**TABLE 101** FLORA INCOGNITA: PRODUCT BENCHMARKING

Products	Application
Flora Incognita	<ul style="list-style-type: none"> <li>• Features:</li> <li>• Uses deep learning to identify wild plants in Europe</li> <li>• Offers detailed ecological and botanical data</li> <li>• Supports species conservation and education</li> <li>• Highly accurate for European wild flora.</li> </ul>

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